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**THE GRAMMAR
OF CAUSATION
AND INTERPERSONAL
MANIPULATION**

Edited by

MASAYOSHI SHIBATANI

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The Grammar of Causation and Interpersonal Manipulation

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Volume 48

The Grammar of Causation and Interpersonal Manipulation
by Masayoshi Shibatani

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Rice University/Kobe University

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To Jim Copeland

on the occasion of his retirement from
active teaching at Rice University in 2001

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Preface

Just about a quarter-century ago, I had an opportunity to edit a collection of papers dealing with causative constructions. To my joy, *The Grammar of Causative Constructions* (Academic Press; 1976) continues to be a standard reference for the subject matter. Since then I had been drifting away from causatives to the wider (and wilder) terrain of voice phenomena for some time, and I was very pleased to be invited to the Rice University Symposium on Causation and Interpersonal Manipulation in Languages of Central and South America held April 6–9, 2000. Naturally, my interest in causatives was rekindled as I participated in this symposium, and I was more than happy to be invited to edit this volume.

A major difference I see between the two volumes is that we now have a wider and more far-reaching perspective on the grammar of causation. Thanks to a better understanding of how different constructions are positioned both synchronically (e.g., on a semantic map) and diachronically (e.g., by grammaticalization processes), we now have a more comprehensive, multidimensional picture of the form-meaning relationship countenanced by causative constructions of different types. The present volume also represents an effort to harness typological data from the field that has been almost entirely neglected in the past discussions of causative constructions, namely the indigenous languages of Central and South America.

The Eighth Biennial Rice Symposium on Linguistics, out of which this volume grew, was organized by the Department of Linguistics with generous support from the School of Humanities, the Dolores Welder Mitchell Trust, and the Center for the Study of Cultures at Rice University. We fondly dedicate this volume to the outgoing chair of the Department of Linguistics, James E. Copeland, who literally was the invisible hand in making the symposium possible.

Editing of this volume was completed during my tenure as a Fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford. The financial support provided by Center general funds is gratefully acknowledged.

Masayoshi Shibatani
Stanford, California

Appreciation

Philip W. Davis

Rice University

On behalf of the Department of Linguistics of Rice University, I would like to join the contributors of this volume in dedicating this volume to James Copeland on the occasion of his retirement from active teaching at Rice University in 2001. The 8th Biennial Symposium on Linguistics, out of which the present volume grew, was originally scheduled for spring 1999; but in April 1998, Jim had a life-threatening accident that forced its postponement to the year 2000. Responsibility for much of the implementation of the symposium then fell to Tom Givón, and although recovering, Jim was still unable to participate fully in the activities. He was missed.

Jim has long been a student of Uto-Aztecan languages, especially Tarahumara, and when he took responsibility for organizing the 8th symposium, it was conceived as representing a combination of interests: the indigenous languages spoken south of the United States with a focus on the broad grammatical presence of interpersonal manipulation. His first encounter with the Tarahumaras occurred when he was a young man traveling by train through the mountains and canyons of Mexico. The train passed through the area in which the Tarahumaras lived. Jim was fascinated, and he promised himself that he would someday come back to learn more about them.

Jim went on to receive his Ph.D. in 1965 in Germanic Linguistics from Cornell University. From the time of his appointment at Rice University in 1966, Jim worked untiringly, first to create an interdisciplinary undergraduate curriculum in linguistics, then to create a department of linguistics with its attendant graduate program. From 1989 until his retirement in 2001, Jim served as chair of the department.

In 1985, Jim returned to the Tarahumaras as a linguist, but because he was first interested in them as a people, his work has always transcended a narrow focus on the language. His research has been broadly based, reflecting a perspective which seeks to understand language as it is embedded in the lives of the speakers. Notable here is his study of what, at first inspection, appears to be rampant and

random variation in the morphophonemics and the phonology of the language. Jim attempts to understand the data as a patterned extension of the material and mental culture of the Tarahumaras.

The Department of Linguistics at Rice has always encouraged the humanistic approach, which has characterized Jim's own work. It has become the home for a variety of broadly-based approaches to linguistics, all united by their placing the speakers of language at the center.

Jim's dedication, vision, and personality have been important elements in shaping the department and its programs. Dedicating this volume to him can only in partial measure recognize his role in making the department what it has become.

Abbreviations

1	= first person singular
2	= second person singular
3	= third person singular
1I	= first person inclusive (plural)
3F	= third person feminine/neuter
A	= the more agent like argument of a transitive verb
A	= set A person marker
ABL	= Ablative
ABS	= Absolutive
AC	= active
ACC	= accusative
ACT	= action
AGT	= agent
ADVZE	= adverbializer
AG	= agentive
ALL	= allative
ANIM	= animate
ANTIP	= antipassive
AOR	= aorist
APPL	= applicative
ARR	= arrival (with motion/locational verbs), finish a discourse span
ASP	= aspect
ASSOC	= associative
ATT	= attenuative
AUG	= augmentative
AUX	= auxiliary
B	= set B person marker
BEN	= benefactive
C	= set C person marker
caus	= lexical/derivational causative
CAUS	= causative
CLEFT	= cleft
COLL	= collective
COMD	= completive for dependent clauses
COMI	= completive for independent clauses
COMP	= comparative
COMPL	= completive

CMPLZR	= complementizer
CONJ	= conjunction
CONT	= continual; continuative
COP	= copula
CSHIFT	= category semantic shift
DAT	= dative
DEFOBJ	= definite object
DEM	= demonstrative
DEP	= departure (with noun/location verbs), start a discourse span
DES	= desiderative
DET	= detransitivizer
DETM	= determinant
DIM	= diminutive
DIR	= directional
DIST	= distant
DISTR	= distributive
DNMZR	= denominalizer
DP	= direct physical
DTRNZ	= detransitivizer
EMPH	= emphatic
ERG	= ergative
EXCL	= exclusive
EV	= evidential
F	= feminine
FSSI	= following event, same-subject, intransitive matrix predicate
FSST	= following event, same-subject, transitive matrix predicate
FUT	= future
GEN	= genitive
GEN_A	= generic agent
HAB	= habitual
HSY	= hearsay, long form
HSY2	= hearsay, short form
I	= intransitive
IMP	= imperative
IMPP	= impersonal passive
IN	= inactive
INC	= incomplete
INCD	= incomplete for dependent clauses
INCEP	= inceptive/inchoative
INCH	= inchoative
INCL	= inclusive
INC.I	= incomplete for independent intransitive clauses
INC.T	= incomplete for independent transitive clauses
IND	= indicative
INF	= infinitive

INST	= instrumental
INT	= interrogative
INTEN	= intention
INTR	= intransitive; intransitivizer
INV	= inverse (for independent clauses)
INVD.C	= inverse for dependent completive clauses
INVD.I	= inverse for independent completive clauses
INV.LOCAL	= inverse for local constructions
IRR	= irrealis
IRRI	= irrealis for independent clauses
IRRD	= irrealis for dependent clauses
IRR.INV	= irrealis plus inverse
HAB	= habitual
ITERAT	= iterative
LOC	= locative
LOCAL	= local marker (1:2) or (2:1)
LOC/ALL	= locative/allative
NEG	= negative
NF	= nonfinite
M	= masculine
MAL	= malefactive
MNS	= means
MODE	= mode (neutralized realis/irrealis contrast)
NEG.HAB	= negative habitual
N	= neuter
NOM	= nominative
NOMI	= nominalizer
NPAST	= nonpast
O	= the less agent-like argument of a transitive verb; direct object
OBJ	= object
OBL	= oblique
PAST	= past tense
PDS	= previous event, different subject
PERDUR	= perdurative
PERF	= perfective; perfect
PL	= plural
PO	= primary object
POSS	= possessor
PO>S/A	= previous event, object-to-subject coreferentiality
PP1	= present participle
PP2	= past participle
PRES	= present tense
PRG	= progressive
PRIV	= privative
PROG	= progressive

PROP	=	propriative
PROX	=	proximal
PSD	=	possessee suffix
PSN	=	possessee prefix
PSSI	=	previous event, same-subject, intransitive matrix subject
PSST	=	previous event, same-subject, transitive matrix subject
PST2	=	'yesterday' or 'a few days ago'
PST4	=	'far away' past
PTCP	=	participle
PURP	=	purpose/purposive
QUANT	=	quantifier
REAL	=	realis
RECIP	=	reciprocal
RED	=	reduplication
REF	=	reflexive
REL	=	relativizer
REM	=	remote past
REP	=	repetitive
RES	=	resolved perfective/perfect (do again, motion back to prior location, resolving once and for all, denouement perfective)
R.PST	=	recent past
S	=	intransitive subject
SAP	=	speech act participant (first and second person)
SAP.PL	=	plural for speech act participants
S _a	=	active intransitive subject
S _o	=	inactive intransitive subject
SBR	=	subject clitic of subordinate clauses
SDS	=	simultaneous event, different-subject
SG	=	singular
SSSI	=	simultaneous event, same-subject, intransitive matrix predicate
SSST	=	simultaneous event, same-subject, transitive matrix predicate
SUBJ	=	subject
T	=	transitive
TEMP	=	temporal
TR	=	transitive agreement
UNCERT	=	uncertainty
UNPOSS	=	unpossessed inalienable noun
VD	=	valency decrease
VOC	=	vocative
VOL	=	volitive
VR	=	verbalizer
>	=	subordinate-to-matrix-clause argument tracking (in switch reference/clause chaining markers)
+	=	combination of unglossed morphemes forming a word
=	=	clitic

Introduction*

Some basic issues in the grammar of causation

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The grammar of causation is one of the areas that have received intensive scrutiny over the past 30 years. For one thing, no grammatical description can be complete without a discussion of causative constructions, because every human language seems to possess a means of expressing the notion of causation, and this ubiquity, in turn, indicates the fundamental nature of this cognitive category. Such a basic category in human conceptualization is an ideal field of investigation for cross-linguistic comparison leading to the study of language universals and cross-linguistic variation. Grammarians have an intuitive understanding of what causation means, as causative expressions, encountered in one language after another, translate rather easily unlike such phenomena as ‘topic/focus’ constructions in Philippine languages, the adversative passive in Japanese, and ethical datives in German or French. Despite these advantages and despite the intensive effort during the last three decades, a great deal about the grammar of causation still remains a mystery. The following chapters contain the most up-to-date efforts to unravel some of the mysteries. By way of introduction, the present chapter identifies a number of fundamental issues tackled by the contributions to this volume and some that still await further investigation.

1. Lexical and morphological matters

1.1 Lexical causatives

Languages vary considerably in the extent to which morphology is employed in expressing causative situations. In languages such as Turkish and Quechua a wide spectrum of event-types undergo morphology-based causativization processes;

e.g., Turkish *ol-dür* ‘kill/cause to die’, *kos-tur* ‘cause to run’, *ye-dir* ‘feed/cause to eat’, *oku-t* ‘cause to read’. On the other hand, languages like English lack productive causative morphology and instead contain a large number of transitive verbs that are causative in meaning but that defy morphological identification of a causative element; e.g., *kill*, *open*, *widen*, *feed*. Even in languages like Turkish and Quechua, there are still a number of atomic lexical causatives; e.g., Turkish *kir-* ‘break’, *yirt-* ‘split’, *dil-* ‘plant’, *yak-* ‘burn’, *sakla-* ‘hide’, and *ac-* ‘open’. One area of investigation open for further research is concerned with the nature of lexical causatives: 1) What kind of causative event is likely to be lexicalized as an atomic unit? 2) How are causative verbs related to other types of verbs semantically and morphologically?

The first question entails another: What kind of situation resists lexicalization and morphological causativization in general? Efforts to answer some aspects of both questions 1 and 2 have been mounted by Nedjalkov (1990) and Haspelmath (1987, 1993). Although these studies are concerned with the derivational relationship between inchoative expressions and causatives – what kinds of event enter into this derivational relationship and the direction of the derivations (causative→inchoative or inchoative→causative) – their findings yield clues for our questions. To say that the anticausative derivation (causative→inchoative) obtains, as in Turkish *kapa-* ‘close (tr.)’ and *kapa-n-* ‘close (intr.)’, is to say that lexical causatives exist. The other direction is a little trickier, in that some languages (e.g., Japanese) may allow both lexical and morphological causatives corresponding to some intransitive verbs. That is, presence of the causative derivation (inchoative→causative), as in Japanese *ori-* ‘come down’ and *ori-sase-* ‘cause to come down’, does not automatically lead to the absence of the relevant lexical causative – Japanese, for example, has a lexical form, *oros-* ‘bring down’, as well. Nevertheless, the causative derivation provides a hint that there may be no corresponding lexical causative.

Haspelmath’s (1993) point that “a factor favoring the anticausative [derivation] is the probability of an outside force bringing about the event” (103) can be construed to mean that such an event is more likely to be lexicalized as an atomic causative verb. Similarly, the converse of the situation above – namely, that “the causative [derivation] is favored if the event is quite likely to happen even if no outside force is present” (103) – can be interpreted to mean that such an event may not be lexicalized as a causative verb. Haspelmath’s cross-linguistic investigation reveals that events of ‘splitting’, ‘closing’, ‘breaking’, or ‘opening’, which are likely to be conceived as those requiring an outside force to happen, tend to involve anticausative derivation, indicating that these are likely to be lexicalized as causative verbs. On the other hand, events of ‘boiling’, ‘freezing’, ‘drying’, ‘waking up’, ‘going out’, ‘sinking’, and ‘melting’ favor causative derivation, pointing to the tendency for these events not to be lexicalized as causative verbs. What cannot be ignored in Haspelmath’s study are the many instances of non-directed derivations

of these events that enter the inchoative/causative pairing. That is, inchoatives and causatives may have identical non-derived forms (a case of “labile” form), or they may each show a derivational status (a case of “equipolent” derivation). The former represents a case of lexicalized causative verbs. In other words, spontaneous events are equally susceptible to both inchoative and causative lexicalization. This tendency is indicated by the fact that if labile forms are found in a language, they are likely to cover the semantic domain of spontaneous events; e.g., English *boil*, *freeze*, *dry*, *sink* (see also the discussion of “internal vs. external causation” by Levin and Rappaport Hovav 1995:Chap. 3).

Haspelmath (1993) laments under-representation of the languages of the New World in his and Nedjalkov’s study referred to above. This deficit has been made up to some extent by contributions by Zavala and by Vázquez Soto in this volume, who examine in some detail causative/non-causative verb correspondences in Olutec and Cora, respectively. A detailed examination of Olutec verbal derivation by Zavala largely supports Haspelmath’s results in that events that are likely to happen without the presence of an external causer tend to be coded as basic inchoatives, which are submitted to causativization, whereas certain other events that could occur either with or without an external causer (e.g., ‘breaking’, ‘folding’, ‘shaking’) are lexicalized as labile inchoative/causative verbs. In Cora inchoatives derived from statives also function as causative, just like English labile verbs such as *widen* and *harden*.

Notice that in all these instances of lexical causatives, the causee plays a patient role. Thus, whereas inchoative verbs involve a patient undergoer as their protagonist, causatives involve an agentive causer and a patient causee as their protagonists, as shown by a pair such as *die* and *kill*. What we do not normally find lexicalized as causative are events involving two agentive protagonists. We are likely not to find a language in which causatives corresponding to verbs such as ‘swim’, ‘sing’, ‘read’, and ‘kick’ are lexicalized.¹ This restriction represents limitation on a cognitive unit that can be lexicalized. That is, the maximal event structure lexicalizable as an atomic unit can include at most one agent; e.g., an event structure consisting of more than one event-segment headed by an agent cannot be lexicalized. This strong constraint on lexicalization is seen to play some important role in the diachronic development of causative forms, as discussed by Shibatani and Pardeshi.

When linguists talk about causative verbs, they focus on those that convey events brought about by an external agent; e.g., ‘kill’, ‘frighten’. When a conveyed event does not entail a change in the patient, as in the case of verbs such as ‘hit’ and ‘thank’, the verb is considered to be non-causative. A similar delimitation has often been applied to morphological and periphrastic causative constructions, such that whereas an expression ‘John forced/persuaded Bill to leave’ is considered causative, an expression ‘John told Bill to leave’ is not (see Shibatani 1976a). In the Leningrad/St. Petersburg School of typology, however, a somewhat more

inclusive framework has been adopted so as to include the latter type of “non-implicative” expression in the typological survey of causative constructions (see Xolodovič 1969). Indeed, a wider scope is called for if we are to understand historical developments of causative constructions, which may arise from non-implicative constructions (see **Maldonado and Nava** and other contributions to this volume).

The same can be said about lexical causatives. In order to better understand the nature of lexical causatives, it is important to study them in a larger context of interpersonal verbs. This is exactly what **Malle** does in his contribution, where he attempts an analysis and classification of interpersonal verbs in terms of folk theory of mind and behavior – intentionality and observability. This scheme opens up a new avenue to explore how causal relations are mapped onto syntax. Verbs can denote (1) causing events with a causer subject (e.g., *A killed B*), (2) resulting events with an affectee as a subject (e.g., *A feared B*), or (3) either (e.g., *A surprised B/A is surprised at B*). These patterns are predicted by **Malle’s** two rules of interpersonal episodes:

- I. Behavioral events that are causing events must be publicly observable.
- II. Behavioral events that are resulting events must be unintentional.

Actions, following rule I and violating II can only be causing events – (1) and (3). On the other hand, experiences, being unobservable and unintentional, violate I and fulfill II; accordingly, they can only be resulting events – (2) and (3). (See **Croft 1991** for a similar attempt in accounting for the syntactic pattern of stimulus-experiencer verbs in terms of the direction of causal implications.)

1.2 Morphological causatives

Related to the question of what event types are likely to be lexicalized as atomic causative verbs is what event types are likely to be morphologically causativized. Before entering this discussion, I note one terminological issue. In the preceding section, I spoke of lexical causatives, pointing to their property of being morphologically unanalyzable, as in English verbs *kill* and *open*. Indeed, some linguists take this formal property to be a criterion for delineating lexical causatives, but some others use productivity as a criterion for distinguishing lexical causatives from morphological ones. In this essay, I follow the latter approach for the reasons debated by **Shibatani and Pardeshi**, who postulate a continuum from highly productive forms to irregular but morphologically analyzable ones, and to atomic lexical causatives. In the end the relevant question can be phrased as “What event types are more easily encoded as causative words?” where the term ‘word’ is to cover atomic lexical causatives and causatives derived by morphological processes of varying degrees of productivity.

The question posed here also involves classification of verbs or the events encoded by verbs. The traditional classification of verbs into transitive and intransitive has been invoked by Nedyalkov and Silnitsky (1973:7), who state that: “It can be established that causative affixes are more productive in combination with [intransitive verbs] than with [transitive verbs].” They note that there are languages, with certain exceptions, in which causative affixes combine only with intransitive verbs; e.g., Arabic, Blackfoot, Gothic. It is also noted to be unlikely that a language involves a causative affix only in combination with transitive verbs. Even in languages that permit morphological causativization of transitive verbs, text frequency of transitive-based causatives appears lower than that of intransitive-based causatives. **Velázquez-Castillo** notes that in Guaraní the transitive-based causatives with the suffix *-uka* are found considerably less frequently – only 16% of all morphological causatives found in the texts she examined.

That a finer verb classification is called for in answering our question is already hinted at by Nedyalkov and Silnitsky (1973:16), who note that in languages where morphological causativization of transitive verbs is unproductive, likely candidates for such conversion are “verbs denoting abstract action” such as ‘see/show’, ‘remember/remind’, and those “denoting the consumption of food” such as ‘drink/give to drink’, ‘eat/feed’ and ‘suck/suckle’.

Thanks to Perlmutter’s (1978) Unaccusative Hypothesis and to the efforts of some field linguists and theoretical linguists (see, e.g., Merlan 1985 and Levin and Rappaport Hovav 1995), we are now more sensitive to finer distinctions in verb classification, going well beyond the traditional classes of transitive and intransitive verbs. As it turns out, intransitives are not uniform in their response to morphological causativization in that inactive intransitives (roughly corresponding to Perlmutter’s unaccusative predicates) are more susceptible to causative conversion than active intransitives (roughly corresponding to Perlmutter’s unergative predicates). This is most dramatically shown in the distribution of causative morphology among Athapaskan languages. Rice’s (2000) survey indicates that all Athapaskan languages can causativize inactive predicates. There are those that in addition causativize active intransitive verbs as well as those that causativize all types of predicates. As summarized by **Shibatani and Pardeshi**, no language morphologically causativizes only transitive verbs or allows morphological causativization of active predicates without permitting inactive predicates to enter the same conversion.

As for transitive verbs, **Shibatani and Pardeshi** expand the class of “ingestive” verbs (e.g., verbs of food consumption and information acquisition such as seeing, knowing/learning) recognized by the specialists of Indic languages (see Masica 1976) to include other middle verbs (e.g., ‘going up’, ‘sitting down’, ‘shaving’, ‘dressing’, ‘washing one’s hands’, ‘combing one’s hair’) that convey situations in which an agent affects itself. As recognized by Nedyalkov and Silnitsky (1973), these verbs

compose a class of transitive verbs likely to be susceptible to causativization if a language ever permits morphological causativization of transitive verbs. Information available so far indicates that we must distinguish at least the following types of verb:

1. Inactive intransitives
2. Middle/ingestive verbs
3. Active intransitives
4. Transitive verbs

The category of middle/ingestive verbs includes both intransitive (e.g., ‘sit down’, ‘ascend’) and transitive (‘put on the clothes’, ‘eat’, ‘learn’) verbs. The ranking of middle/ingestive verbs and active intransitives is not entirely clear at the moment. Languages that are said to morphologically causativize only inactive intransitives may contain lexical causatives such as ‘show’, ‘dress’, and ‘feed’. **Vazquez Soto** shows that in Cora active intransitives generally resist both morphological and periphrastic causativization, but ingestive verbs allow either of these conversions. When a language places an agentivity restriction on its periphrastic causativization so that a periphrastic construction disallows a patient causee, it normally divides intransitives into active and inactive types. Inactive intransitives tend to have corresponding lexical causatives, or less productive causatives, and active intransitives (and transitives) are made causative periphrastically, as in Marathi. Under such a circumstance, middle/ingestive verbs respond to both causativization possibilities, such that they may have both corresponding lexical/morphological causatives and periphrastic constructions (see **Shibatani and Pardeshi** on Marathi), and this is what Cora ingestive verbs show (also see a relevant discussion on verbs of knowledge and perception in Classical Nahuatl by **Launey**).

Our next question is why inactive intransitive verbs are easiest to causativize. The discussion above on middle/ingestive verbs indicates that the semantic role of the protagonist of the event denoted by a verb may have something to do with this question. Transitive middle and ingestive verbs are different from regular transitive verbs in that their main protagonists are both agentive and patientive – they both act and get affected, thereby meeting both the patient restriction imposed by lexical causatives and the agentivity restrictions some periphrastic constructions impose.

In other words, an event involving a patient protagonist apparently makes it easier to causativize morphologically. Capitalizing on this observation, **Launey** offers a formal account for the distinction between the *-tia* causativization and *-l-tia* causativization in Classical Nahuatl. His account essentially says that the simpler form obtains when an agent slot is open in an argument structure. That is, causativization of inactive intransitives is “easier” because the agent introduced by causativization can just fill the vacant agent slot in the argument structure. But, when causativization introduces a new agent to the argument structure in which

the agentive role is already filled, as in the case of active verbs and transitive verbs, an extra step is needed in accommodating the new agent. One way of doing this is the formation of a compound relation consisting of a causing event structure (with its own argument structure hosting an agent) and a caused event structure. (Another is changing the role of the newly introduced agent to something other than that of an agentive causee – see Shibatani and Pardeshi on this option argued for by Ichihashi-Nakayama 1996.) Launey's point is that the morphological complex *-l-tia* in Classical Nahuatl reflects the extra step of reorienting the argument structure in accommodating two agents necessitated in the causativization of active intransitives and transitive verbs.

The markedness relation seen here between the *-tia* and the *-l-tia* causativization in Classical Nahuatl indicates the difficulty a language faces in causativizing verbs involving an agentive protagonist. The formal account, however, does not explain why active intransitives and transitive verbs are treated differently. As pointed out above, what we observe is a hierarchy of **inactive intransitives** > **active intransitives** > **transitives** rather than **inactive intransitives** > **active intransitives/transitives**, as suggested by the distinction of the empty vs. occupied agentive slot in the argument structure.²

It seems that the relevant hierarchy reflects the degree of difficulty in bringing about a causative situation. When the causee is patientive, the only resistance the causer encounters in bringing about the change in the causee is the latter's inertia – continuing to rest or continuing to undergo a change. It is simply a matter of overcoming this inertia, and the execution of the caused event is entirely under the agent's control. In contrast, when the causee is agentive, the causer must appeal to the causee agent's volition in carrying out the caused event. Whatever effort the causer might exert in bringing about the agentive caused event, it cannot effect it without a volitional involvement of the causee. For example, one cannot bring about the event of walking or reading of a book by the causee without the latter's volitional involvement. Moreover, the agentive causee as a free agent may resist the effort by the causer in bringing about the caused event; and thus dealing with an agentive causee requires more delicate manipulation than dealing with a typically inanimate, patientive causee.

The distinction between active intransitive events and transitive events results from the difference in the effort required in the execution of these two types of event. Execution of an active intransitive event requires less effort than of a transitive event, for while the action remains within the domain of the agent in the former, it must extend over to a patient in the latter. Transitive activities are also likely to require more elaborate mental as well as kinetic efforts than intransitive ones – compare the effort involved in simple walking with that needed in leading someone. In other words, expected resistance is greater in making someone execute a transitive event than in making him carry out an intransitive event.

Languages disallowing morphological causativization of active intransitive or transitive events resort to periphrastic constructions, in which an explicit causative verb occurs as an independent predicate, although its status may be reduced to that of an auxiliary verb. As a first approximation, we can say that the difficulty in effecting the caused event is correlated with the formal distinction between morphological causatives and periphrastic constructions. The more difficult it is to bring about the caused event, the more explicitly the causative meaning must be indicated.

As it turns out, the relevant distinction is not just between morphological causatives and periphrastic constructions. In many languages (e.g., Japanese), atomic lexical causatives and morphological but irregular forms are opposed to productive morphological causatives, the former being associated with inactive intransitive events and the latter with active intransitive and transitive events. Thus, within morphological causatives, the relevant distinction is drawn. The notion that unifies productive morphological causatives and periphrastic constructions is that of productivity and its twin notion of morphological transparency. The more regular causative morphology is, the more transparent the causative formative is. In other words, morphological transparency correlates with the difficulty in bringing about the caused event. The hierarchy of **inactive intransitives** > **active transitives** > **transitives** representing the difficulty in obtaining lexical and morphological causatives represents the difficulty in bringing about the caused event, and this is formally represented by the transparency of the causative formative, such that the more difficult it is to bring about the caused event, the more transparently the causative meaning is expressed.

The plausibility of the account above is seen by comparing lexical causatives with productive counterparts in those languages in which both options are permitted for the same verb. Lexical causatives represent simpler, routine causative situations, whereas productive counterparts in either regular morphological form or periphrastic construction express situations requiring unusual, elaborate, and more involved efforts. McCawley (1972: 147–148) compares the Japanese lexical causative *tome-ru* ‘to stop’ and its productive morphological counterpart *tomara-se-ru* ‘to cause to stop’ and tells us that turning off an engine in the normal manner by using a key would be described as *enzin-o tome-ru* ‘to stop the engine’. But if one were to stop the engine in an unusual manner such as throwing in sand or sticks and jamming it, then the productive expression, *enzin-o tomara-se-ru* ‘to make the engine stop’ would be used. Notice the strong sense of resistance conveyed by this expression; it is as if the engine, with its own will, didn’t want to stop.

Similar observations are made in a number of contributions to this volume. Velázquez-Castillo notes that the causative of the intransitive verb ‘eat’ with the prefix *mo-* (used for intransitive-based causatives) conveys a regular assistive meaning, but the causative of the transitive verb ‘eat’ with the suffix *-ka* (for transitive-based causatives) implies that the causee is forced to eat. Zavala points out that

Olutec labile verbs (e.g., *pu* ‘split’, *pot* ‘break’), when used as lexical causatives, express a situation where the inanimate causee offers no resistance. When these verbs are derived by the productive causative prefix *yak-*, they portray situations involving “a series of circumstances that make it difficult for the event to take place.”

A more involved situation is seen in Shipibo-Konibo, where, as described by Valenzuela, there are a fairly large number of lexical causative verbs (e.g., *meno-* ‘burn’, *toe-* ‘break’). These can be detransitivized by the suffix *-t* (*meno-t* ‘burn (self)’, *toe-t* ‘break (intr.)’). These derived intransitives can be submitted to the causative process by the use of the productive suffix *-ma*, yielding lexical-productive doublets. Again, the forms with the transparent causative suffix convey unusual and more elaborate causative situations.³

A number of contributions to this volume make relevant points related to the present discussion. Maldonado and Nava, in discussing multiple causative forms in Tarascan, speak of event complexity, which is formally reflected in causative constructions of different types. Lexical causatives and other lexically restricted morphological causatives involve simpler event structure than those derived by productive suffixes or through periphrasis. According to these authors, the latter are associated with more involved initiations on the part of the causer such as verbal instructions and involvement of intermediate means. In dealing with the nominalization-based causatives in Akawaio, Stefanowitsch posits a resultative-causative continuum that reflects both the dynamicity of the causing event and that of the caused event. He then recognizes a correlation between the dynamicity of the result and the causative verb employed – a causative verb more explicit in its force dynamic meaning, e.g., English *force*, is correlated with a more dynamic result.

The semantic account offered above about the distribution of lexical and morphological/periphrastic constructions may be countered by the fact that syntax interacts with the choice of causative options. As Zavala and Velázquez-Castillo show, noun incorporation interacts with causativization in both Olutec and Guaraní. In these languages there are causative affixes used exclusively for intransitive verbs. Transitive verb-bases become intransitive by incorporating a patient nominal. Once this is effected, the affixes for intransitives can be used to derive causatives from these originally transitive verb-bases. Because the noun-incorporating structure is arguably still transitive in meaning, one might argue that the causativization of transitive verb-bases here is syntactically motivated. Such a view, however, is tenable only if one assumes that noun incorporation has no semantic effect or that the transitive structure with a distinct object noun phrase and the noun-incorporating intransitive structure represent the same pattern of conceptualization of events.

Sapir (1911:264) suggests that these two different structures portray different types of activity, by saying that

what may be called typical or characteristic activities, that is, those in which activity and object are found regularly conjoined in experience ... tend to be expressed by verbs with incorporated object, whereas accidental or indifferent activities ... are rendered by verbs with independent, syntactically determined nouns.

A similar observation is made by Mithun (1984), who notes that noun incorporation is invoked in portraying conventional, routine activities. For example, the conventional door-opening activity would be expressed by a structure incorporating the notion of the door into the verb, whereas an unusual manner of opening the door such as opening it with one's head would be rendered in a transitive structure.

These observations indicate that the noun-incorporating structure differs in its semantic structure from the corresponding transitive construction. Especially relevant to our discussion is the notion of conventional activities. Such activities require less effort to bring about, as they are routinized, thus aligning themselves more closely with intransitive activities than non-routine transitive activities, which require more focused attention and greater effort in effecting them. Consider how unconscious and effortless it is to drive a car in routine commuting, and compare it with driving a car for the first time, or with driving a new car in unfamiliar terrain. Noun-incorporating languages can clearly express this kind of subtle meaning difference between a routine activity and an unconventional one with which causative formation interacts in a predictable way. Imagine how difficult it is and how much resistance is expected in making someone open the door using the head, as opposed to getting the door opened in a conventional way.

The discussion in this section shows that language possesses different means for expressing different causative situations. Atomic lexical causatives and those that express situations involving a human causer and a patientive and most often inanimate causee are more prevalent because our dealing with the environment requires such expressions. The pervasiveness of such causative events, hence the high frequency of referring to them, correlates with the formal simplicity of the relevant expressions. In dealing with animate, especially human causees, however, the causer must be engaged in a more delicate and elaborate causing activity, as the situation demands overcoming a volitional causee with a free will and with certain social standing. Grammar reflects this distinction in a rather systematic way, such that compared to the situations involving a patientive causee, those involving an agentive causee correlate with a more elaborate expression, as **Maldonado and Nava** demonstrate. Predicating on the understanding of the society of intimates, **Givón and Young** elaborate on this and make a number of general predictions on the grammatical form and its meaning used in reporting a manipulative act. The

structure showing the highest level of clause integration (hence structural simplicity), as in the case of a lexical causative, codes the strongest and most direct causation and is most likely to involve a non-human patient as the causee. Constructions displaying a lower level of clause union (hence greater structural complexity), as in periphrastic constructions code weaker and/or less-direct causation and are more likely to have a human agent as a causee.

2. Direct and indirect causation

Perhaps the single most important semantic distinction linguists make in accounting for different causative forms is that between direct and indirect causation, as shown just above. Despite its great importance, the relevant notion has not been satisfactorily defined, and grammarians have been using the terms “direct causation” and “indirect causation” and related ones rather vaguely without a rigorous definition. Relying heavily on the works of the Leningrad/St. Petersburg typologists (Xolodovič 1969, in particular), Masica (1976: Chap. 3) makes use of the notions of “distant” (or “indirect”) and “contactive” proposed by our Russian colleagues in his extensive survey of causative constructions among South Asian languages of the Indian subcontinent. Summarizing their achievements, Masica speaks of the relevant notions in the following way:

A causative verb denotes an action that calls forth a particular action or condition in another person or object. This causation may be principally of two kinds, “distant” and “contactive”. In the latter the agent does something to the object, bringing about its new condition by direct contact; in the former he makes use of an intermediary agent and serves only as the “instigator” of the act. (p. 55)

This explanation is supported by the demonstration of distant (or indirect) causatives in Hindi expressed by the *-waa* suffix (sometimes rendered as *-va*): “The *-waa* forms are always unambiguously *indirect* causatives (involving use of an intermediate agent): *calwaa-* ‘have someone drive’, *likhwaa-* ‘have someone write’, *khilwaa-* ‘have someone feed’, *banawaa-* ‘have someone build’, etc.” (p. 45)

Making recourse to the notions of direct (or contactive) causation and indirect (or distant or mediated) causation seems a standard practice in clarifying the difference between the so-called first causative and second causative in Hindi and other Indic languages, where the relevant distinction is typically demonstrated by the forms corresponding to expressions such as ‘Ram broke the mirror’ (direct/contactive) vs. ‘Shyam made Ram break the mirror’ (indirect/distant/mediated) (see, e.g., Kachru 1976). Indeed, in the former type of expression, the causer typically comes into direct contact with the causee patient. In

the latter, the causer's relation to the ultimate causee patient (the mirror) is distant or indirect in that it does not come into direct physical contact with it, and there is a clear intermediary agent involved, who mediates between the initial causer agent and the resulting state into which the ultimate causee patient enters. The presence of an explicit or implicit intermediate agent thus appears to be a defining feature of the relevant contrast between direct and indirect causation.

Apparently, however, actual situations are more complicated. What is not made clear in these discussions is the status of the forms corresponding to expressions like 'Sima made Raj drink tea' and 'Sima made Raj walk'. As for the former, Hindi uses the first causative form, and accordingly Kachru (1976) treats it as a case of direct causation, despite the fact it contains an intermediate agent, who drinks tea. As for the latter type of expression involving active intransitive verbs, Masica (1976: 80) makes the following remarks with respect to the Telugu causative suffix -*INCU*, which is normally used in indirect ("mediative") causation: "The suffix -*INCU* is also added to certain intransitive and semitransitive bases ... to form first causatives. However, a case can be made for most of these also having a 'mediative' (indirect, non-'contactive') implication: *navvu/vavvINC* 'laugh/make laugh', *erpu/erpINC* 'cry/make cry', *ekku/ekkINC* 'climb/help climb' ..."

What is disturbing in this interpretation is that the notion of an "intermediary" agent – the defining feature of indirect/non-contactive causation – does not apply felicitously here. In what sense is the child "intermediary" in the expression 'I made the child laugh', for example? The understanding of the notion of an intermediary agent based on examples like 'I made the child break the mirror' (see above) does not straightforwardly answer this question.

The recent discussion on the notions of direct and indirect causation by Dixon (2000) does not go beyond Masica (1976). Dixon (2000: 67) identifies directness of causation as one of the relevant semantic parameters. Under the heading of "Directness. Whether the causer acts **directly** or **indirectly**," he tells us, in reference to the works on Hindi by Y. Kachru and A. Saksena, that the two relevant suffixes in this language "differ in terms of directness – suffix *-a* indicates that the causer acts **directly** and *-va* that they [sic] act **indirectly**" (bold face original). What does it mean for the causer to act directly or indirectly? No clear definition is given. In reference to Hindi, Dixon (pp. 67, 70) seems to imply that acting indirectly means involving an intermediary agent. This is consistent with the understanding of this notion by Masica and by many others in the field of South Asian linguistics. In reference to Telugu, however, he seems to mean a situation not necessarily involving an intermediary agent in the sense above, for he describes an event of a nurse's telling a child to walk as a case of indirect causation (p. 68). Although the issue rests on the definition of an intermediary agent, for which no rigorous definition has been offered by Masica (1976) or Dixon (2000), Dixon's description has managed to cause some confusion in his fellow contributor to the volume in which his paper

appears. Rice (2000) has apparently taken the presence of an intermediary agent as a defining feature of indirect causation and has decided to categorize Athapaskan expressions ‘he makes him swim’ and ‘she let him wear a hat’ as direct causatives because “causers act directly in Athapaskan languages” (p. 213) (see **Shibatani and Pardeshi**).

Saksena (1982:823) argues that the previous treatments of South Asian causatives suffer from a “misconception ... that causative contact comprises a unitary semantic notion” and proposes to decompose the notion of contact into two semantic components – whether or not the causer is personally involved in the verb activity, [\pm involved]; whether the causee is affected or not, [\pm affected causee]. Saksena tells us that “[f]or causative contact to be initiated, the causer must be personally involved in the verb activity” (p. 824). This kind of characterization remains vague and useless until the notion of personal involvement and that of the ‘verb activity’ are rigorously defined. How does a causer personally get involved in the “activity” of breaking in the contactive expression ‘I broke a cup’ when it is only the cup that undergoes the change? If by ‘verb activity’ is meant the entire causative event of breaking, for example, then the causer is personally involved in all types of causative – otherwise a causative situation does not obtain. Could she mean the activity expressed by a verb root, not that expressed by the entire causative form? This won’t do, because the contactive verb such as *parh-aa* ‘teach’ has the verb root *parh-* ‘read’ but the causer does not (necessarily) get involved personally in the activity of reading when he teaches.

Here is one version of the original statements on the relevant distinction by the Leningrad/St. Petersburg typologists. The following quote is from Nedyalkov and Silnitsky (1973:10–11), a revised version of Nedjalkov and Sil’nickij (1969) included in the collection edited by Xolodovič, which Masica (1976) studied.

In the case of distant causation there is a mediated relation between the causing subject and the caused state in which a greater or lesser independence of the caused subject is actualized in its initiation (or failure to make an initiation) of the states s_j . This mediation often appears in an actualization of a certain time interval between the causing (s_i) and caused (s_j) states. Permissive causation is according to this definition always distant. The subject of the caused state (r_j) in the case of factitive [i.e., non-permissive] distant causation is usually animate: *ja prikazal emy ijti* (I ordered him to leave).

The characteristics mentioned above are absent in the case of contact causation. Factitive contact causation can have either an animate (a) or an inanimate (b) r_j : (a) *ja ispugal ego* ‘I frightened him’, (b) *ja otkryl dver’* ‘I opened the door.’

Contact causation tends to be found more often than distant causation in typical recurrent situations.

Nedyalkov and Silnitsky's mention of a time interval between the causing event and the caused event is perhaps one of the most important features distinguishing direct and indirect causation. Shibatani and Pardeshi attempt clarification of this distinction in terms of spatiotemporal configurations of the causing and the caused sub-event in the total causative event structure. Spatiotemporal features interact with the agency of a causee because a volitional agent can execute a caused event spatiotemporally apart from the causing agent. Prototypical association of direct causation with a patientive causee and of indirect causation with an agentive causee reflects typical world events. Physical manipulation is required in causing a change in a patientive, typically inanimate entity, whereas speech-act manipulation of the volition of a causee is the normal pattern of interaction when both causer and causee are human. Shibatani (1973, 1976a) opted for the terms "manipulative" and "directive" in reference to these prototypical patterns of the causer-causee interaction. These are rather faithfully grammaticalized in the Papuan language Yimas, where direct/manipulative causation is rendered by the verbal roots *tar-/ta-l* 'hold' and indirect/directive causation by *tmi-* 'say'. According to Foley (1991), (a) below with *-tar* "denotes waking someone up by physical manipulation, say, by shaking, while [(b)] indicates an event caused by a verbal act, say, by calling someone's name or by yelling." (p. 291)

- (a) na-na-tar-kwalca-t
 3SG.A-1SG.O-CAUS-rise-PERF
 'She woke me up.'
- (b) na-na-tmi-kwalca-t
 3SG.A-1SG.O-CAUS-rise-PERF
 'She woke me up.'

3. Continuum

One of the running themes of this volume is the notion of continuum in both semantic and formal dimensions of causative constructions. Aspects of continuum in the formal dimension are adumbrated by a number of contributions to this volume, and a full sketch of a formal continuum in a grammaticalization perspective is offered by Shibatani and Pardeshi.

Achard deals with the continuum phenomena of the three types of French periphrastic constructions. On the one hand, the three types, identified as VV, VOV, and VOàV, show a formal continuum with regard to the degree of union between two verbs. This formal continuum correlates with the degree of semantic integration of the causing and the caused event as well as with the degree of the causee

autonomy and that of the causer control. Achard argues for a construction grammar approach, which allows him to show how these different types of causative constructions assemble out of the global French ecology in portraying causative scenes and how the existing constructions are extended to new situations.

I already pointed out above (see Section 1.2) that the notion of continuum plays an important role in Maldonado and Nava's and Stefanowitsch's contributions – the former in relation to the notion of event complexity and the latter in relation to the dynamicity of the causing and the caused event. Although many different semantic distinctions, including those taken up in these contributions and others, make up the causative semantic dimension, most of them are connected with the fundamental distinction of direct and indirect causation touched upon in the preceding section. The importance of the directness dimension is underscored by Velázquez-Castillo's contribution, in which different types of Guaraní causative, ranging from the direct physical causative to the directive non-implicative expression, are located at different points along the directness dimension.

An interesting manifestation of the directness semantics is found in the causer nominalization construction in the Panoan language Matses. As described by Fleck, there are four patterns of causer nominalization in this language involving *-quid*, *-me-quid*, *-an-quid*, and *-anmës*. Fleck attempts to show that they reflect different degrees of directness; e.g., *cuid-quid* 'one that enchants' > *mamën-me-quid* 'one that makes laugh' > *chësshëd-an-quid* 'one that makes one scrape oneself' > *maocud-anmës* 'one that causes hair to fall out'.

In contrast to a clearer picture in the formal dimension, the semantic continuum has been more difficult to demonstrate, despite its importance and its high relevance to other oft-invoked semantic distinctions (see below). Shibatani and Pardeshi take up this challenge and identify an intermediate category of sociative causation forming a bridge between the direct end and the indirect pole. Sociative causation itself comprises three subtypes, "joint-action", "assistive", and "supervision", which also form a continuum. The entire directness dimension is thus rendered into the following continuum, where neighboring types share a certain similarity; **Direct–Joint-action–Assistive–Supervision–Indirect**.

Clarification of the direct–indirect continuum adds substance to the continua implicated in other terms such as the degree of integration of the causing event and the caused event, and its correlative pattern in the strength of control on the part of the causer and the counteracting causee autonomy (Givón 1980). Semantic integration of the causing event and the caused event is motivated by the spatiotemporal configuration of these two causative sub-events – the greater the overlap is, the more tightly the sub-events are integrated. On the one hand, Shibatani and Pardeshi's directness continuum is substantiated by the spatiotemporal configuration of the causative sub-events. On the other hand, it is directly correlated with the degree of control of the causer over the caused event. The continuum in fact

represents a hierarchy of this dominance relation of the causer with regard to the caused event, from the direct end representing the highest degree of control. Conversely, the hierarchy represents the degree of autonomy of the causee, the direct end aligning with the lowest degree of causee autonomy.

Shibatani and Pardeshi show the reality of the intermediate sociative category by its relation to applicative constructions. They argue that the causative-applicative connection observed in a large number of languages is mediated by the sociative category. Causatives may give rise to applicative constructions especially under lexicalization pressure. Payne, however, shows that Asheninka (Maipuran Arawakan) causatives have developed from a comitative sociative category, which in turn appears to have evolved from the reflexive/reciprocal function. Causative-applicative interactions are also discussed by Zavala and Maldonado and Nava.

4. Syntactic matters

There are two areas of syntactic issues to which a number of contributions to this volume provide particularly important inputs. One area has to do with the syntax of double objects, and the other with the mono-clausal/bi-clausal controversy.

4.1 Grammatical relations

Comrie's (1976) discussion on the grammatical status of the causee nominal has aroused considerable interest in the typological literature of causative constructions. But penetrating analyses of the syntactic status of the causee in its own right and in its relation to that of the basic patient nominal have been few in number (see Kozinsky and Polinsky 1993 for the relevant literature). More often than not, simple remarks on case-marking patterns and/or verb-marking patterns are made with the assumption that they reflect the standard correspondence pattern of marking and grammatical relations – accusative/verb marking = direct/primary object; dative/non-verb marking = indirect/secondary object. Although doubling of the syntactic relation of object has been reported sporadically (again see Kozinsky and Polinsky 1993 for the relevant literature), its status remains controversial. In their recent work Kozinsky and Polinsky (1993) demonstrated that double accusative objects of causative constructions and others in Korean and Dutch do not in fact involve doubling in the direct object relation, i.e., there is only one direct object function in them, despite doubling of accusative marking. In this light, Fleck's contribution on Matses is particularly interesting. He shows that Matses does not distinguish between direct object and indirect object in ordinary clauses. In causativization of transitive clauses, the causee nominal and the base patient

nominal also do not show this distinction either, indicating that Matses presents a genuine case of syntactic doubling of grammatical objects. A similar symmetric object system is also demonstrated for Shipibo-Konibo by Valenzuela, and, as Fleck suggests, it could be a typological feature of Panoan languages.

The second contentious issue relating to the grammatical relations has to do with situations involving asymmetric objects; namely with the distinction between the direct/indirect object (DO/IO) system and the primary/secondary object (PO/SO) system proposed by Dryer (1986). Many languages reported in this volume present data that point to Dryer's PO/SO system; Olutec (Zavala), Tarascan (Maldonado and Nava), Cora (Vázquez Soto), and Sikuaní (Queixalós). In these languages, a recipient/goal of a ditransitive verb (e.g., 'give') is grammatically treated like an object of a monotransitive clause, as opposed to being treated distinctly from the latter (as in French and Japanese), and the causee nominal of a transitive-based causative behaves like the recipient/goal.

Dryer (1986) considers the following patterns of object grouping to represent two distinct systems of grammatical relations – the DO/IO system (i) and the PO/SO system (ii).

- i. $O = P \neq R$ (DO/IO relations)
- ii. $O = R \neq P$ (PO/SO relations)
(O = 'object' of a monotransitive clause; P = patient of a ditransitive clause;
 R = recipient of a ditransitive clause)

As Dryer suggests, the distinction is analogous to that between the accusative and the ergative pattern:

- iii. $S = A \neq O$ (Subject/Object relations)
- iv. $S = O \neq A$ (Absolutive/Ergative relations)
(S = 'subject' of an intransitive clause, A = agent of a transitive clause, O = patient of a transitive clause)

Most of the relevant contributions to the present volume assume without questioning the PO/SO relations, the former of which the causee nominal of a transitive-based causative construction comes to bear. That is, a causee nominal is treated like the recipient nominal of a ditransitive clause, which in turn is treated like an object nominal of a monotransitive clause. But Queixalós does question the need for introducing new object relations distinct from the traditional direct object and indirect object relations. Indeed, what is identified as a primary object behaves exactly as an ordinary direct object does; i.e., it participates in such phenomena as marking in the verb, accusative marking, becoming the subject of a passive clause. If so, argues Queixalós, there is no reason to distinguish primary objects from direct objects, as long as grammatical relations are to be characterized by their morphosyntactic properties.

Of course, there are other ways of defining grammatical relations. Although Dryer (1986) is not explicit about this (but see the discussion toward the end of his article), and although he shows the need for distinguishing the Subject/Object relations from the Absolutive/Ergative relations as well as the DO/IO relations from the PO/SO relations by pointing out that a single language may contain phenomena sensitive to these different types of grouping of nominal elements, the real motivation for distinguishing the PO/SO relations from the DO/IO relations (and the Subject/Object and Absolutive/Ergative relations) seems to be the difference in alignment of these with semantic roles. As the comparison between (i) and (ii) shows, the DO relation obtains from the generalization based on the patient role. That is, a non-subject nominal of a monotransitive clause is assimilated to the patient nominal of a ditransitive clause; hence the union of O and P in (i). This is not so for the PO relation, as seen in (ii), where it is based on the union of an O(bject) and R(ecipient). In other words, a direct object is a patient-based category, whereas a primary object is a recipient-based category.

By taking this difference in alignment of grammatical relations and semantic roles as a defining feature, one can argue that the DO and the PO are different grammatical relations. This position is similar to the one that argues for the absolutive relation separate from the subject on the basis of the difference in semantic-role alignment – the Subject is agent-based, whereas the Absolutive is patient-based (cf. (iii) and (iv)).⁴ Recognizing the absolutive relation removes the discomfort of having to recognize a patient-based subject, which is required of those who wish to extend the subject relation to the absolute nominal of an ergatively organized clause. Similarly recognizing a primary object removes the discomfort of having to recognize a recipient-based direct object.⁵

Whether one subscribes to the purely morphosyntactically based approach to grammatical relations or to the one that takes the semantic-role alignment pattern into consideration, one is bound to be embroiled in the controversy over the universality of grammatical relations. One group of contributors to this volume adopts the PO/SO relations, thereby implicitly suggesting that a language can do without the DO/IO relations, whereas **Queixalós** maintains that these new object relations are not necessary, implying that the DO/IO relations obtain wherever double-object constructions exist.⁶

4.2 Mono-clausal/bi-clausal controversy

One controversial issue that has not been pursued in earnest in any of the contributions in this volume has to do with the nature of the abstract representation of superficially simplex causative clauses. Both **Launey** and **Queixalós** propose abstract analyses for some of them involving bi-clausal representations, but the the-

oretical status of these representations is left unclarified; e.g., are they syntactic or semantic representations? Valenzuela points out a phenomenon (the scope of adverbial modification) suggestive of the bi-clausal nature of one type of morphological causative in Shipibo-Konibo. But again, the question of whether such a phenomenon is best treated in terms of syntax has been left unexplored.

Most of us agree that causation is a relation between two events (Shibatani 1976a). The question is whether we need a level of abstract syntactic representation between the event structure consisting of two sub-events connected by a causal relation and superficially simplex causative constructions, typically manifested by morphological causatives. Shibatani's (1973, 1976a) answer was that we need an abstract bi-clausal embedding representation for some of the morphological causatives (e.g., Japanese productive *sase*-causatives). The relevant phenomena for this position include the scope of adverbial modification and reflexive binding, which indicate that some morphological causatives contain an embedding syntactic structure, which can function as a scope for adverbial modification and whose subject nominal can function as a reflexive antecedent. The line dividing simplex structure and embedding structure mostly coincided with the distinction between lexical causatives and productive causatives (of both morphological and periphrastic type).

Nevertheless, the recognition of the intermediate category of sociative causation by Shibatani and Pardeshi has opened up a new perspective on the correlation between lexical causatives and direct causation and that between productive causatives and indirect causation. Especially important is the realization that in some languages (e.g., Korean and Marathi) lexical causatives express sociative causation, whereas in others (e.g., Japanese and English) productive forms represent this intermediate causative category. Shibatani and Chung (2001) have discovered that the forms expressing sociative causation behave identically whether they are lexical, morphologically productive, or periphrastic, indicating that actual forms do not really matter; what matters is the causation type expressed. This discovery prompted the authors to explore the possibility of accounting for the relevant phenomena (especially adverbial modification and reflexive binding) directly in terms of event structure of the type proposed by Shibatani and Pardeshi in this volume. This approach obviates the abstract embedding syntactic representation for superficially simplex causative constructions and merits further investigation.

5. Coda

This introduction has touched on only those general yet fundamental issues that all the contributions to this volume address. Each contribution in addition reveals in-

triguing intricacies that a specific language displays in grappling with the task of expressing a variegated pattern of manipulative interactions centering on causation. If one finds joy in discovering how languages can be similar and so interestingly different at the same time, this volume offers a thrilling experience.

As the preceding discussion shows, we see greater penetration to some issues than others, and it is clear that despite the intensive studies and steady progress made over the last 30 years on the grammar of causation, a great deal remains to be investigated. But for now, let us enjoy the fruits of our labor.

Notes

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1. English has a number of verbs, e.g., *walk*, *march*, *jump*, that appear to encode events involving two agentive protagonists. But, the status of these verbs is not entirely clear. For one thing, it is not clear if the notion of causation is involved in such uses as *John is walking the dog* and *I will walk you home*. Some uses of them can be construed as expressing sociative causation (see Shibatani and Pardeshi, this volume), but in general they can be understood as a case of construal of indirect causative situations in terms of the direct causative. That is, when a situation involving an agentive causee is entirely under the control of the causer, such a situation is often construed in terms of a direct causative, especially when the situation involves conventionally determined causer and causee roles (see Shibatani 1973, 1976a).

2. Actual synchronic distribution of causative forms in a language may not faithfully reflect the pattern of **inactive intransitives** > **active intransitives** > **transitives**. Active intransitives, as in Cora, may not be as easily causativized as either inactive intransitives or transitives. This can happen as a stage in historical development. Suppose that a productive morphological causativization applies to both inactive intransitives and active intransitives, whereas a periphrastic formation applies to transitives (as in, e.g., Athapaskan languages Ahtna and Navajo). The productive morphological process in such a situation may undergo (further) grammaticalization/lexicalization such that only inactive intransitives are causativized by the same process. Usually, the available periphrastic construction will be extended subsequently to cover active intransitives. But there might be a time lag between the two changes creating a stage in which active transitives are not causativizable either morphologically or periphrastically.

3. Nedyalkov and Silnitsky (1973) also recognize the same type of distinction between forms that express “contact” causation and those expressing “distant” causation, and remark that “contact causation . . . is connected with the most often recurring, typical situations.” (p. 16)

4. Dryer (1986) believes that the nominative-accusative pattern and the PO/SO pattern are linked to discourse-pragmatic function, and that the absolutive-ergative and DO/IO pattern are linked to semantic roles. This distinction can perhaps be derived from the distinction made in the text, namely the ‘agent-based category’ vs. the ‘patient-based category’ and the

‘recipient-based category’ vs. the ‘patient-based category.’ The categories based on agent and recipient refer to an entity of high topicality, namely a human participant, which has a more prominent discourse-pragmatic function than an inanimate participant assuming the role of a patient.

5. The discomfort of identifying a subject with a patient and an object with a recipient derives from the understanding of these grammatical relations as realized in Indo-European languages. As such it may be simply dismissed as Eurocentric bias. On the other hand, extending the notion of subject to ergatively organized clauses may be interpreted as imposing a Eurocentric view of grammar on a system distinct from that of I-E languages.

6. I am grateful to Francesc Queixalós for discussing with me the issues taken up in this section.

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Cooperation and interpersonal manipulation in the society of intimates

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1. Introduction¹

1.1 The social context of interpersonal manipulation

Our purpose in this paper is to outline the social context within which manipulative speech-acts and thus manipulative grammatical constructions arise in languages of traditional small-scale societies. Within such a context, we would like to suggest, it is useful to distinguish first between the actual *use* of speech-acts in direct interpersonal manipulation, on the one hand, and the *reporting* of such acts in subsequent interpersonal communication.

The bulk of the grammar of causative constructions in languages of small-scale traditional societies, we suspect, pertains to the second type of social behavior, communication about manipulation. Nonetheless, it is likely that the attitude prevailing in such societies toward direct interpersonal manipulation interacts with the way members communicate about it.

The *societies of intimates* we refer to here are small, strongly consensual, and profoundly non-hierarchical. But their egalitarianism and seemingly anarchic structure often mask the fact that they regulate interpersonal interaction rather extensively by means of rigid cultural conventions. Such conventions are so all-encompassing and pervasive as to leave relatively little room for arbitrary manipulative demands by one member over another. Of the few exceptions to this, the most common one is where the manipulee is a young person under one's kin-defined charge.

We have both spent a considerable proportion of our professional life studying the cultural and communicative organization of such societies, as have generations of anthropologists and linguists. So that while our report here remains in essence

qualitative, it is derived from the cumulative field study of many cultures, during many years of work by both ourselves and others.

What one should expect in such societies is that actual manipulative acts among adult conspecifics would be indirect, implicit and subtle. They are more likely to be *solicitations of cooperation* rather than attempts at direct coercive manipulation.

Given such social expectations, we concede that direct manipulative grammatical constructions, such as causatives, are largely irrelevant to actual manipulative speech-acts between adult members of traditional small-scale societies. Such speech-acts, we suspect, will be directed only at non-human or immature causees. It is only in the reporting of such acts to a third party that grammaticalized causative constructions become relevant.

1.2 Rational choice vs. cultural conventions

We will spend the bulk of this paper outlining how trust and cooperation are organized in societies of intimates. In a broad outline, we will suggest that:

- The patterns of trust and cooperation in societies of intimates arose through a protracted, adaptive cultural and biological evolution;
- These patterns persist in contemporary societies of intimates; and
- These patterns remain highly relevant to the organization of trust and cooperation in contemporary complex societies.

We presented an earlier version of this paper to a forum consisting largely of *decision science* specialists. What prompted our initial interest in the subject was a long-term if somewhat superficial exposure to a certain strain of decision science literature. Embedded within the *rational choice* tradition of economics and game theory, this literature reports the behavior of strangers assembled for a single occasion in an experimental lab, and given various tasks in which they have the option to cooperate, defect, or refuse to play (see e.g., Dawes, McTavish and Shaklee 1977; Dawes, Orbell, Simmons and van de Kragt 1986; van de Kragt, Dawes and Orbell 1988; Orbell, van de Kragt and Dawes 1988; Caporeal, Dawes, Orbell and van de Kragt 1989; Orbell and Dawes 1991; *inter alia*). The various options are couched in terms of *social dilemmas*, such as the ‘prisoner’s dilemma’ of lore. Various conditions are added or subtracted, and their effects on cooperation or defection are measured. From the results, conclusions are then drawn about the nature of human social cooperation and, by implication, manipulation.

Several features of this tradition are particularly worrisome to us because they seem to go counter to what we know about cooperation under real-life conditions in societies of intimates. These features are:

- That individuals view cooperation (primarily) as a matter of *choice* – rational or otherwise;
- That the choice is motivated (primarily) by considerations of *individual* – rather than group – benefits; and
- That cooperation is primarily among *strangers*.

A few words are perhaps in order about why we consider the very term “rational choice” problematic. John Orbell (personal communication) suggests that there are at least two ways of interpreting “rational choice” within the tradition of *egoistic incentive*, and that only the second one is taken seriously anymore by sophisticated scholars:

- i. **Literally:** that people consciously make self-serving choices; and
- ii. **Metaphorically:** that the results of individual actions turn out to be self-serving, and thus – regardless of conscious motivation – “seem as if” they were rationally self-serving.

Our observations about cooperation in societies of intimates suggest that the literal interpretation (i) is unrealistic, since it fails to characterize the actual mechanisms of social cooperation. While the metaphoric interpretation (ii) seems somewhat vacuous even *qua* metaphor, because it is fairly guaranteed to foster misunderstanding.

The point we would like to make is fairly innocuous. Through protracted evolution, primate social species have adopted *social-cultural mechanisms* of cooperative decision making. That such cultural – and its concomitant biological (see Caporeale et al. 1989; Tooby and Cosmides 1992; Orbell et al. 1994) – evolution is adaptive is self-evident, and largely a matter of definition. Being adaptive and group-serving, the behavior is thus also self-serving, again largely by definition. But this still does not make “rational choice” a useful description of the mechanism, neither of the adaptive evolution nor of the resulting behavior. It thus seems to us that Caporeale et al. (1989) dismiss culturally-transmitted values (Campbell 1975) prematurely, as they opt for a more hard-wired biological alternative along the lines of Boyd and Richerson (1985):

... Campbell (1975) proposes that abstract cultural ideals such as fairness, equity, sharing etc. are instilled in individuals as “conscience”, general rules and customs that guide interactions with others ... In our view, it makes no difference whether a choice payoff is external (such as avoiding a sanction or obtaining rewards through reciprocity in the future) or internal (as in having a clear conscience, heightened self-esteem, or the avoidance of guilt). An individual whose decision can be traced to a positive psychological payoff is acting on the basis of egoistic incentive ... (Caporeale et al. 1989:686)

Campbell's (1975) socially-mediated values are indeed a poor substitute for rational choice – if they are construed as conscious motives. Our observations of societies of intimates, however, suggest that cultural values are most often ingrained and subconscious. While the actual behaviors may not be as hard-wired as genetically-coded behaviors, they certainly display considerable rigidity – *ritualization* – and should be perhaps best viewed as occupying a mid range on the cognitive-behavioral-evolutionary continuum:²

(1) **Continuum of degree of choice:**
least constrained

individual “rational” choice
culturally-constrained choice
genetically-constrained choice

most constrained

The balance between self-serving and group-serving behavior in the society of intimates has been characterized succinctly by Stiles (1994):

... the evolutionary ecological paradigm [and one must add the rational choice paradigm] focuses on the individual as the unit of investigation and assumes that the individual is capable of free choice. It also assumes that all decisions must result in a positive outcome, as measured by reproductive fitness, for the individual. These assumptions would be incomprehensible to a traditional forager, and they contradict an enormous body of empirical ethnographic data. Individuals will certainly try to act in their own self-interest, but cultural rules, if followed, prevent them from being too selfish ... Individuals are more or less forced to cooperate and share ... (1994:439)

We would like to suggest that culturally-transmitted patterns of cooperative behavior are central to social decision making, and that, further, they do not contrast but rather complement, and interact with, biologically-transmitted (“cognitive”) mechanisms. Cultural and evolutionary explanations are thus not exclusive of each other, but rather complementary and mutually dependent. If coherent, stable cultural values are transmitted, what is the adaptive mechanism that brought about the evolution of such values? Conversely, if social behavior and other higher-level cultural traits have a component that is already genetically encoded (Tooby and Cosmides 1992), what was the behavioral pattern that pioneered such an adaptation?

The latter question of course presupposes something that is increasingly acceptable to evolutionary biologists. To quote Ernst Mayr:

... Many if not most acquisitions of new *structures* in the course of evolution can be ascribed to selectional forces exerted by newly acquired *behaviors*. Behavior, thus, plays an important role as the *pacemaker* of evolutionary change ... (1982:612; emphases added).

An anthropologist might note that in social species, culture has become the mediating mechanism between individual behavior and genetic evolution. That is, (Givón 1989, Ch. 10):

- Individual behaviors that yield an adaptive advantage become cultural norms; and
- Cultural norms are, in turn, the pace-makers of evolutionary change in social species.

We thus take the general perspective that the human species, and in fact its primate forebears for as long before it as can be tracked, evolved as a social species. Self-interest, the rational choice tradition's great motivator (Adam Smith's *Invisible Hand*), has always operated within the context of culturally- and genetically-encoded sociality. And for societies of intimates, the "self" is often the group rather than the individual.

2. Societies of intimates

2.1 Preliminaries

The human social species and its primate relatives evolved as a small-group adaptation, or what we refer to as the *society of intimates*.³ These are traditional foraging (hunting-and-gathering) societies that were the sole institutional form until about 8,000–6,000 BC. With plant and animal domestication and the beginning of sedentary village life, the patterns of cooperation that had developed during millions of years of hunting and gathering adaptation were continued and elaborated upon by emerging societies of cultivators and pastoral nomads. In their more pristine form, such societies can be still characterized as societies of intimates.

As increasingly complex institutional forms emerged, rather than disappear altogether, societies of intimates continued to co-exist with and within the larger social units of cities, states and empires, i.e., larger and more complex *societies of strangers*. Even within present-day industrialized Western countries, substantial vestiges of the society of intimates persist, most notably in small isolated rural communities. Likewise, in less developed countries, substantial populations of small-scale indigenous societies of intimates exist as enclaves within the nation-state, only partially (and to varying degrees) integrated into the larger society of

the nation-state. Such enclaves retain many of their own cultural norms, including patterns of trust and cooperation. It is from the numerous societies of this type that we have assembled the following sketch.

2.2 General characteristics

We will begin by outlining briefly the main salient characteristics of societies of intimates.

a. *Small size of social group.* The size of small hunter-and-gatherer tribal societies seldom exceeds 100. For foraging social primates, including early hominids, the size range of 50–150 has remained extremely stable over the last several million years (Dunbar 1992). And even villages of subsistence agriculturalists and camps of pastoral nomads seldom exceed 200 individuals. Such small size is conducive to familiarity and very high frequency of personal interaction among all members.

b. *Foraging economy.* The society of intimates evolved in the context of hunting and gathering (foraging), supporting flexible omnivorous feeding. The technological simplicity of such an economy most commonly also involved a feast-or-famine cycle, since little could be stored for later feeding. In such a context, within-group sharing of both food and foraging activities mitigates the feast-or-famine cycle and thus has a great adaptive value for both the individual's and the group's survival.

c. *Restricted territorial distribution.* The effective range of hunting-and-gathering groups was traditionally within a 10–20 miles radius. These were thus societies with a relatively stable native terrain, a terrain whose features were intimately familiar to all members. Individuals developed a strong emotional attachment to the group's territory (Schieffelin 1976). The overall population density of foraging societies is low, and social groups live effectively in *communicative isolation* from each other, except for rare contact – most commonly hostile – at the boundaries.

d. *Restricted gene pool.* Social grouping is invariably kinship- or descent-based, binding together individuals who acknowledge shared ancestry. Various provisions are made for exogamy, usually with a highly restricted set of other groups, as well as for splitting the group when its size exceeds the optimal range. The social group is thus the product of a much more restricted gene pool than is the case in complex societies of strangers.

e. *Cultural uniformity.* Status and role differentiation within the society of intimates is relatively low, and is based primarily on biologically defined parameters –

gender, age, descent line and personality. There is no full-time, rigid occupational specialization and little social stratification.

While perhaps not egalitarian in the absolute sense of Power (1991), societies of intimates – both human and pre-human – are notoriously flat and non-hierarchical, with the well-known exception of personal *dominance hierarchies*. Such hierarchies are, paradoxically, both rigid and fluid: rigid at any given moment, so that group members always know their exact position vis-à-vis all other members; but fluid in the sense of being largely dependent on personality (culturally desired personal abilities; charisma) and thus essentially open to readjustment and change (de Waal 1982; Power 1991). But the fluidity and possible readjustment are themselves governed by relatively rigid cultural norms that are known to all members.

f. *Informational homogeneity and stability*. The world-view of group members is extremely uniform and universally shared. With the absence of occupational differentiation, the small size of the descent-based group, the small and stable terrain and the relatively low rate of physical and cultural change, most *generic cultural knowledge* is in essence shared equally by all members.

New information spreads rapidly and quickly becomes universal, due to proximity, intensive daily contact and small group size. Even the willful behavior, motivation, propensities and caprices of members are to some extent well-known to all members of the social unit, for the same reasons. The society of intimates is thus a society of high *informational predictability* in the three major categories that form the context for communicated knowledge:

- generic culturally-shared knowledge (world knowledge);
- the shared current situation (situation knowledge); and
- the specific action or communication of individuals (episodic knowledge).

g. *Consensual leadership structure*. The society of intimates has always been profoundly consensual in the organization of action, cooperation and leadership. Leadership is seldom formalized by either volunteering, election or force. It simply emerges through the imponderable but socially recognized charisma (Power 1991) leavened with attested competence. Such leadership as there is remains contingent. It tends to be organized for the occasion and quickly dissolved. While often dependent on age and kinship, either correlates with leadership only through its contribution to socially-recognized charisma and competence. To quote Power (1991):

... The immediate-return foraging group is a consensus polity (Turnbull 1968a; Silberbauer 1981). Nowhere in these societies do we find a secular authority backed by power (Turnbull 1968a). There is no permanent leader. In-

deed, the constant change of leaders gives the appearance of there being none (Woodburn 1982) ... (1991:46)

h. *Kinship-based social cooperation.* The social organization of the society of intimates is descent-based (in a biological sense), as in the case of all social primates, or kin based, in the case of humans. The latter is a more elaborate transformation emerging from the former, and may also include association by marriage, adoption, or various ritualized association. But whatever the exact basis of the kinship, all cooperation is predicted from it. And, as Stiles (1994) has noted:

... the principal objective is the survival of the group,
not the individual ... (1994:438)

All interaction in societies of intimates, if not based explicitly on ties of consanguinity or affinity, is modeled after them. That is, friendly relations among non-kinmen are functional analogues (or ‘metaphors’) of kin relations. In such a social organization, there are relatively few open choices. Or, as Stiles (1994) puts it:

... people in traditional societies are constrained in their decisions by cultural rules ... (1994:438)

Every member of the social unit knows, by virtue of membership and for each social-cooperative context – procreation, child-rearing, subsistence, warfare, construction, ceremonies – who he/she owes what to and who owes what to him/her, and under what conditions. This knowledge is shared by all members of the intimate social unit. It is an important part of socialization of the young, and is largely taken as a given. This is part of the paradox of these consensual, egalitarian societies: Their structure is in fact quite rigid; available choices are limited and well circumscribed.⁴

This rigidity of social structure and the limitation of choices is an important ingredient of the high degree of predictability of the social behavior of all group members. And this predictability is in turn a major factor in promoting trust and cooperation among members, since each one can almost automatically rely on cooperation and reciprocity in each culturally-governed social context.

Non-cooperation with strangers. There are few provisions in the kin-based society of intimates for knowing, meeting, interacting, communicating with or cooperating with strangers. Almost by definition, the lack of well-defined position within the rigid social structure makes it impossible to carry on non-hostile interaction with a stranger. From the perspective of network organization, a *floating node* without clear connecting lines to other nodes cannot be part of a functioning network.

The only consistent provisions made for dealing with strangers are those of *incorporation*, most commonly by marriage, adoption or kidnap/slavery. One may look at such provisions as mechanisms for *de-alienation*.

In the next sections we will elaborate on some of the central points in this sketchy description.

3. Kinship-based cooperation: The Trobriand case

We would like to illustrate the use of the kinship system as the venue for cooperation in small traditional societies by citing the Melanesian exchange system as described by Malinowski (1932, 1935), in his work on the exchange system of the Trobrianders. Malinowski mistakenly referred to yam presentations (and other exchanges) as *urigubu*. *Urigubu* does not, in fact, refer to yam presentations at all, but to exchanges of other types of goods. In our description, we rely heavily on the amplification and clarification of Trobriand exchange by Weiner (1976). We have also consulted three interpretations of Trobriand kinship, by Leach (1958), Lounsbury (1965), and Weiner (1976).

3.1 Land ownership, land-use and residence

Land, the most important economic asset in Trobriand society, is held in common by male members of the matrilineal sub-clan. Usually the land is controlled by only one or two men of a sub-clan; others establish use rights.

In order to receive rights to land use, a young man must attach himself to an older male who has already established his own right to reside in a particular hamlet. (Weiner 1976: 146)

The young man must then produce a yam exchange garden to secure his own land use rights. A boy's first yam exchange garden is usually made for his father or an older married brother. Most men continue to live in the hamlets of their fathers after marriage. Only the older sister's oldest son is likely to reside, after marriage, in the hamlet of his mother's brother, as it is only he who stands in direct line to inherit control of his sub-clan land. Thus, one form of Trobriand exchange is yams for land use.

3.2 Kinship and marriage

All social and economic obligations of a Trobriand male are defined by three potentially conflicting organizational principles:

- Birth clan membership;

- father’s clan residence and land use; and
- marriage into another clan

Marriage must be out of one’s own clan and thus into a potentially “enemy” clan. Some specific marriage prohibitions also apply: All women of one’s mother’s clan (i.e., one’s own matrilineal clan) are non-marriageable, as are some categories of women in one’s father’s clan.

The preferred or ideal marriage for a man is to a father’s sister’s daughter or a woman in the same kin category within his father’s clan. Such women are referred to by the kin term *tabu*, and are considered by the Trobrianders to be distant kin (or, in some cases, non-kin). Closeness versus distance of kin relations is socially, not biologically, established. Thus, a father’s sub-clan is, in our view, potentially an “enemy” clan if relations are not renewed through repeated marriages through successive generations. *Tabu*, according to Leach (1958:132), as a general term refers to all potentially hostile outsiders.

3.3 The life-cycle of cooperation

In his early life, a boy works for his father, residing and eating at his father’s matrilineal sub-clan hamlet. At puberty and until marriage all boys ideally sleep together at the “bachelors” house. All through a boy’s childhood and adolescence, one of his mother’s brothers has been making yam gardens for the boy’s mother, with the yams being presented to the boy’s father. His father, in turn, has been making yam gardens for one or more of his own married sisters. When a boy’s sister marries, his father will initially make yam presentations to her husband. The boy, at maturity, will take over this task, making yam presentations to his sister’s husband.

A boy becomes a man upon marriage, and then establishes his own residence, usually remaining in his father’s sub-clan hamlet, where he has already been working and eating. He continues to make yam gardens for his father. In exchange, he receives access to resources, including land use, of his father and father’s sub-clan. In addition, the boy now begins to make yam gardens for one or more of his married sisters and make yam presentations to their husbands, thus relieving his father of that obligation.

3.4 The logic of the Trobriand yam exchange

While one marries, preferentially, into one’s father’s sub-clan, this is a potentially “outsider” or “enemy” group if the relationship between one’s own matrilineal sub-clan and that of one’s father is not maintained through marriage. One pays yams to “outsiders” who married into one’s own matrilineal sub-clan – the husband of one’s mother (one’s father) and the husband of one’s sister. Yam payments can

thus be seen as a ritualized mechanism for *de-alienating* strangers who have married into one's own sub-clan. You give yams to your father and your sister's husband, and you receive them from your sons and your wife's brother. Interestingly, as Weiner makes clear (1976:195–210), men who receive yams in the name of their wives – as is always the case in these presentations – are obligated to expend some of their own wealth, e.g., pigs, valuables, Western trade goods, to obtain for their wives women's wealth – banana leaf bundles and grass skirts. This women's wealth is distributed at the women's mortuary ceremony. This purchase for his wife of women's wealth is in fact the other half of the exchange for the yams received from his brother-in-law!

As we interpret these data, in the Trobriand scheme of things one could be in only three fundamental social relations:

(2) **Trobriand social relations:**

●**Consanguinity:**

kinship ⇒ similarity ⇒ solidarity

●**Separateness:**

non-kinship ⇒ strangeness ⇒ enmity

●**Friendship through affinity (marriage):**

proximity without consanguinity ⇒ dangerous grounds

Marriage is the mechanism for inducting outsiders (potential enemies) into a tenuous friendship, thus neutralizing their potential animosity. But such tenuous friendship remains *dangerous grounds*. The exchange system is designed to constantly tend to, attenuate and neutralize this problematic relationship with strangers in close proximity.

3.5 Kinship and reciprocation

The yam presentations and women's wealth distribution are not in the strictest sense an instance of symmetrical direct exchange. But in a roundabout way the system is one of reciprocal exchange nonetheless. The transactions between any two individuals are only temporarily asymmetrical. The direction of giving between two individuals, e.g., father and son, may reverse after a period of several years (Weiner 1976:125–126). Within the system as a whole, goods circulate among all group members, women and men. You receive from and give to different people, but both your cooperative obligations and your cooperative expectations are totally predictable from your position ('node') within the kin-and-marriage-based network.

A kin-based social organization for cooperation could just as easily involve symmetrical reciprocity, which may be then encoded by the kin terminology itself. For example, in the Ute (Uto-Aztecan) kinship system, four kin terms exist

for grandparent: “maternal grandfather” (*toghochi-n*), “maternal grandmother” (*kaguchi-n*), “paternal grandfather” (*kɛnuuchi-n*) and “paternal grandmother” (*whciichi-n*). These terms are used reciprocally – your grandparent will refer to you by the same term you refer to him/her, regardless of your gender. And indeed, the grandparent-grandchild relation is a special reciprocal one, often transcending the relationship with one’s parent (“leap generation”).

4. Dealing with strangers

4.1 Enmity and de-alienation: The Western Apache case

The society of intimates at its prototype core has no provision for cooperative, non-hostile interaction with strangers. The opportunities for meeting, interacting, getting to know, trusting and eventually cooperating with strangers are rare. Whether among primates or humans, the society of intimates seems to observe, with various degrees of latitude, the hermetic injunction:

- Cooperate only with those you trust.
- Trust only those you know.
- Never talk to strangers.

We begin this section by surveying a study that describes the cultural projections emanating from the injunction “Never talk to strangers.” We will note how the injunction transforms, and how mechanisms for de-alienation make it possible to accommodate the injunction. We begin by summarizing Basso’s (1972) observations on the uses of silence in Western Apache (Athabaskan). The first and most obvious context for keeping one’s silence, Basso observes, is upon meeting a stranger.

a. *Upon meeting a stranger.* The definition of ‘stranger’ in Western Apache is roughly ‘a person known or unknown but never before engaged in direct verbal interaction’. In other words, established prior intimacy is a prerequisite for meaningful interaction. The Western Apache do not introduce strangers to one another and do not engage in conversation with strangers until considerable time has passed (often days rather than hours). “‘Strangers’ who are quick to launch into conversation are frequently eyed with undisguised suspicion.” (Basso 1972:72)

b. *Courting.* One marries exogamously outside one’s own kin-unit. As in Melanesia then, one marries into an “outsider clan.”⁵ One’s spouse, until de-alienated, is thus the classical stranger and potential enemy. Courting behavior is thus different from joshing, buddy, horsing-around behavior among intimates. Courting

begins by silence, and only gradually does the proximity engender intimacy, and eventually talk.

c. *Children coming back home.* Long absence from intimate daily contact creates alienation. The reunion of erstwhile intimates after a long absence is fraught with potential danger.

The erstwhile intimate may have become *alienated* during protracted absence from daily contact. One treads on delicate ground with a returning erstwhile intimate. One must remain on one's guard until the stranger is de-alienated by time spent at close proximity. During such proximity, the "stranger" is observed closely to ascertain whether s/he has indeed become a dangerous alien.

d. *Getting cussed out.* When an intimate cusses one out suddenly, out of the blue, one does not respond. Rather, one withdraws into silence. The logic of such an extension of silence is fairly transparent: One does not expect an intemperate verbal assault from intimates. Such gratuitous hostility from an intimate signals alienation. One is suddenly facing, in open conflict, a kinsman who is, incongruously, acting like a stranger.

e. *Being with people who are sad.* After mourners emerge from the purification ceremony that must follow a death, one treats them with wary ceremonial silence. Visiting is traditionally expected, but silence prevails. The purification ceremony is a protracted withdrawal, its participants go out of sight. Not only that, but potential contact with the spirit of the dead prior to decontamination is extremely hazardous, and may convert the mourning person into a dangerous being, a stranger. Until successful decontamination has been accomplished, one remains on one's guard with "those who are sad."

f. *Being with someone for whom they sing.* Curative singing for the sick is an ancient custom. But all sickness and death, except in the very young and very old, is triggered by malevolent alien powers that invade and contaminate sick people, taking over them and converting them into aliens. The curing ceremony purports to expel such a power and de-alienate the victim. Traditional medicine situations are thus extremely hazardous, and one does not maintain intimacy with the sick.

4.2 De-alienation in other contexts

Provisions for de-alienating strangers are not exclusive to *homo sapiens*, and presumably pre-date human cultures. Both primate and other mammal societies have some such provisions, as no doubt did early hominids, although seldom are the

provisions quite as elaborate and ritualized as the Melanesian exchange system or the various de-alienation provisions of the Western Apache. We will cite here only two cases.

A most impressive documentation of de-alienation can be found in a film made by Jane Goodall on the life of a pack of hyenas in East Africa. The story focuses on the misadventures of a young male who had gotten detached from his original social unit. His repeatedly rebuffed attempts to join another pack veer widely between the hilarious and the heart-rending. After nine months of abject failure, the dominant female of the family he targeted for incorporation relents one night, allowing him to sleep next to her in the den. This explicit act of adoption transformed him overnight from stranger to kin, acceptable to the rest of the family, thus to the whole pack. The gawky, needy teenager had been de-alienated.

Equine social interaction is characterized by a precise hierarchy of dominance, ranking all mares linearly even in the absence of a stallion.⁶ The payoff of dominance is access to both food and the stallion. The equine pecking order is extremely stable and prevails for long periods without violent confrontations – as long as no stranger is introduced. But the minute a new mare joins a pre-existing herd, a series of violent confrontations erupt, and last until the new mare finds her precise rank in the social order. Superficially the confrontations sometimes have the appearance of a chaotic melee, but in fact it is made out of distinct one-on-one violent challenges and responses, with the new mare both challenging and being challenged by various group members. The dominance display signals used during this phase are the most extreme on the scale. They de-escalate gradually toward the more communicative (rather than “secular”) end of the scale.⁷

One conspicuous exception clause to this procedure is the status of the newborn and young. A filly born to a dominant mare can get away with claiming higher status, to the point of pushing even her own mother around. The high-ranking mother tolerates such behavior and sanctions it vis-a-vis lower-ranking mares. But upon removal of the mother, the filly must readjust her social status on the scale according to her own abilities. The reach of *kinship* has now ceased to matter. This adjustment, unlike the absorption of a total stranger, is done with considerably less violence, thus with recourse to more communicative dominance signals.

Higher mammal societies can apparently make provisions for de-alienating and absorbing a total stranger. Exogamous breeding among non-human primates creates another context for such provisions. But such contexts are relatively rare. And the provisions made to deal with them, rather than obviating the norm, illuminate it: You don't cooperate with strangers, unless you first de-alienate them and convert them into intimates.

Finally, one needs to recall that in social mammals, the extension of reciprocal cooperation from blood kin to other intimate associates has been well documented, as in, e.g., chimpanzees (de Waal 1982) and vampire bats (Wilkinson

1990). While blood kinship has always been the most obvious foundation of intimacy, its extension to more ‘cultural’ patterns of friendships, alliances or coalitions clearly pre-dates human evolution.

5. Mitigating the hazards of communication in the society of intimates

From the preceding discussion, particularly Section 2, it may appear that the society of intimates is an informational common pool where, through daily intimate contact and spatial proximity, most generic information is shared and new information spreads instantaneously. This is in a way true. But this facet of the society of intimates is complemented by two well-known paradoxes that do not quite follow. One concerns the costs of transacting new information, the other the irrelevance of relevance. These paradoxes are well known to anyone familiar with the dynamics of small, isolated, rural communities, where everybody knows everybody (and their business) intimately, where the proverbial *bush telegraph* is hyperactive, and where gossip – both friendly and malicious – is rife. The two examples we have chosen illustrate these paradoxes, in each case via observations made in the North American Indian (Native American) reservation context. In both cases, the seeming paradox turns out to revolve upon the need to avoid, at all costs, the alienation of intimates.

5.1 Private discourse and the costs of new information

Susan Philips (1974) has identified six rules of caution – circumspection, indeed avoidance – in transacting new information in a North American Indian context:

- Avoid explicit information about *past events*;
- Avoid identifying *participants* by name;
- Avoid being identified as *source of information*;
- Avoid being identified as *author of prediction*;
- Avoid citing your *source of knowledge*; and
- Avoid using explicit *negative statements*.

These features of Amerindian – and indeed of much small-town – communication stand in sharp contrast to presumed norms of communication described by academic scholars of conversation (Grice 1975; Gordon and Lakoff 1975; *inter alia*). The academic literature identifies, as norms or injunctions, “truthfulness”, “explicitness”, “exhaustiveness”, “relevance” and “avoidance of redundancy.” How can the society of intimates get away with flaunting these norms? And why is new information about well-known intimates seemingly so costly?

There is a compelling logic to the principles noted by Philips, a logic emanating in each case from the potential for *alienation*.

- One’s business is everybody’s business in the society of intimates. Information about any member is not neutral, but may – and often does – impinge on the well being of many members. New information, whether it turns out to be correct or fallacious, may have unforeseeable consequences, for which one may absorb the blame and pay by alienation from intimates. Thus, by avoiding explicit commitment to the transacted – often solicited – information, one forestalls potential alienation.
- All members of the intimate network are related to all other members and know each other well. New information spreads and will soon reach its subject. No information is lost by avoiding explicit mention of persons involved in events. They can be easily identified even from the most oblique reference. By eschewing explicit identification, one reserves the right of *disclaimer*, thus avoiding potential alienation, from either the hearer or, soon enough, the subject.
- Similarly, avoiding being identified as the source of new information is vital, since the information may soon reach its subject, often with distortion and added interpretation and embellishment.
- Predictions are chancy and one may be held responsible for them whether they turn out right or wrong. Either way, the potential for alienation is vast and should be avoided.
- Citing one’s sources will embroil another person, an intimate, in the web of the potentially dire consequences of alienation. And that in turn will rebound back to the speaker. One’s sources must thus be left obscure.
- The negative speech-act is not merely informative, it is an act of denial, casting doubt on the other person’s veracity, good faith and character. It is an alienating device *par excellence* even in the most de-personalized academic discourse.

Societies of intimates are forever wary of the potential for alienating intimates. The consequences of alienation in such societies are enormous, since one remains in daily contact with alienated former intimates. And social cooperation is based on intimacy and the primacy of the group’s interest over self-interest. The conversational style of such societies reflects these concerns.

5.2 The irrelevance of relevance in public discourse

The paradox of the irrelevance of relevance is derived from our own field observation in two Amerindian societies, the Utes (Uto-Aztecans, North America) and the Ngóbe (Chibchan, Panama).

The Ute deliberative style violates a great number of supposed Western norms, both those proposed by conversational analysts (e.g., Schegloff 1972) and by logicians (Grice 1975). In spite of expressed adherence to Roberts' Rules of Order and a published agenda, the following features seem to characterize public deliberation by Ute decision-making bodies:⁸

- Don't force a vote in the absence of clear consensus, but rather table, delay, drop.
- Never compete for the floor. Allow for a long silence when a speaker has finished his/her turn, to ascertain that they are indeed done.
- Don't feel constrained by the announced topic(s) on the published agenda.

Except for adherence to Roberts' Rules of Order and a published agenda, Ngóbe deliberative style closely resembles that of the Utes'. Group decision-making among the Ngóbe is traditionally a deliberative process of consensus building. Everyone has the opportunity to express their views in the public forum (as well as lobby in private) even when, to the outside observer, some views expressed in the discourse seem irrelevant to the matter at hand. Interrupting another speaker is highly inappropriate, to the point of having never been witnessed through months of research. Directly challenging another member's views in a public forum is likewise highly inappropriate. One may allude obliquely to another person's position, but direct criticism is socially unacceptable. The cultural norms dictate an atmosphere of mutual respect and solidarity despite what may be real and serious differences.

The process of arriving at consensus may drag on for months, and sometimes yields no decision. The matter is then simply dropped (or, in Ute official deliberations, "tabled"), an outcome that is acutely unsatisfying to a Western observer. From the Ngóbe (and Ute) perspective, however, such non-resolution is quite appropriate, since it preserves the group's social cohesion. In the slower pre-Western times, at least, no action was always preferable to precipitous non-consensual action.⁹

How do these features hang together, and how do they work? Do they accomplish arriving at collective decisions and cooperative actions? How does manipulation occur, as it must in any instance in which consensus is achieved? In order to understand both the logic and efficacy of the Ute and Ngóbe way of public decision making, one must note first that the Utes and the Ngóbe, like most societies of intimates, have traditionally resisted both leadership and enforced non-consensual action.

Attempts to impose action had traditionally resulted either in splintering the community¹⁰ – literally, geographically – or in ignoring presumptive claims to leadership. Splintering, a traditional provision for alienation upon loss of intimacy, was facilitated in the case of the Utes by the vast territory controlled by a small hunting-and-gathering people grouped in small loosely-defined bands.¹¹

In the case of the horticultural Ngóbe, fission was facilitated traditionally by low population density and a settlement pattern of highly dispersed small hamlets occupied by close kin.

The imperative of consensual action in societies of intimates springs from the destructive consequences of lingering dissension when majority rule is imposed. In small intimate societies, the presence of even a few disgruntled dissenters has potentially destructive social consequences, ones that the intimate society seems reluctant to entertain.

Non-competition for the floor is part of the mechanism for toning down public display of aggression and eventually hostility. Such mechanisms are well known in tribal societies, viz. earlier discussion of the use of silence upon “being cussed out” (Basso 1972). They are also reported in primate societies (de Waal 1982; Power 1991).

The irrelevance of the published (or announced) agenda topic, finally, is the most puzzling aspect of Ute and Ngóbe public deliberation. Once launched into his/her turn, a Ute – whether an elected official or member of the public – is allowed to have his/her say about any topic, including the recitation of past events, personal anecdotes, old grievances, historical reminiscences and more. Intervention by the chair, to remind the person of the topic, would be rude and is rare. The Ngóbe pattern is quite similar. The non-competition provision is part of the mechanism that allows speakers maximal deliberative elbow-room. How can rational public decisions be arrived at under such a seemingly irrational system?

The answer lies in the underlying purpose of public deliberation, what it is all about. Ute and Ngóbe public deliberation is, to this day, not really – or at least not only – about the published agenda. This is in spite of the fact that eventually a vote on the announced topic may be taken, and action may ensue. Public deliberation is, perhaps more importantly, about establishing, reestablishing and maintaining the group’s *spiritual consensus*. This means, roughly, the reaffirmation of *commonality* and *trust*.

What the speakers appear to be doing as they launch into seemingly irrelevant subjects is reestablishing their *spiritual bond* and *communal bona fide*. In the society of intimates, this is the precondition for joint action. People assemble to deliberate after days, weeks or even months of individual activities, and in the Ute and Ngóbe traditional context often also after a period of considerable physical separation.¹² The first task at hand is then to reestablish the sense of commonality, the prerequisite for trust. Once trust is reaffirmed, people tend to go along with whatever action is suggested by trusted, charismatic, tried and tested members. They do so not because of rational analysis, but because of personal trust.¹³

Small town America retains many of the salient features of Amerindian public discourse. It frowns on open verbal confrontation, it skimps on negation, it encourages indirection. There is remarkably little competition for the floor, and

speakers are allowed their long-winded say. Above all, when one aims to conduct business, even urgent business, one better visit first – gossip, re-establish social intimacy, reaffirm the bonds of commonality and trust. Only then can one transact business. And being in a hurry, skipping the rituals of de-alienation, is invariably rude, city folks' bad habits.

6. How culture co-opts individual choice

Individual choice in the society of intimates is highly constrained by relatively rigid cultural norms that govern most facets of social interaction. We will illustrate this further by citing, albeit briefly, the Ngóbe way of arbitrating disputes.

In the process of arbitration in Ngóbe society, one's kin group is expected to provide moral support by attending and usually speaking at night-long dispute resolution meetings. The cultural imperative to lend this form of cooperation is so strong that it transcends the realm of individual choice. Not supporting a kinsman – 'defecting' – is so foreign to Ngóbe culture that it is unlikely to occur. In several months of field work, not a single instance of such 'defection' was observed.¹⁴

Electing 'not to play' is not a matter of individual choice either. A Ngóbe may opt not to play without incurring social sanctions only if he/she is related to *both* kin groups on the opposite sides of a dispute. Under such conditions, if one had opted to play, one would be forced to cooperate with one kin group and defect from the other, an unacceptable choice. In reality, few Ngóbe ever face such a dilemma, because disputes between linked kin groups are much less frequent than between non-linked groups.

The forum for Ngóbe dispute resolution is a meeting that begins in the late afternoon or early evening and lasts through the night. A mutually agreed-upon arbitrator is seated, and the same "facts" are repeated again and again by participants on both sides. Several such meetings may take place over the course of several weeks or months before an agreement is reached.

The objective of the process is *not* to resolve the case to the advantage of one side over the other, but rather to restore harmony between the two groups. Both the individual protagonists and their respective kin groups must agree to the settlement, and much within-group consultation takes place. Once an agreement is reached, each side trusts the other implicitly to abide by it. For a small society of intimates such as the Ngóbe, harmonious relations with nearby non-kin (or distant-kin) groups has a great survival value. Cultural norms that rigidly prescribe the modes of trust and cooperation thus represent an immense adaptive advantage.

7. Culture as a mechanism of automated social action

What we have described thus far suggests that cooperation in the society of intimates is most commonly not a matter of choice, rational or otherwise. The great bulk of occasions for cooperative action are processed through relatively rigid culturally-shared mechanisms. Such mechanisms are *conventionalized*, *routinized*, and often *ritualized*. They allow relatively little leeway for individual choice. For as long as one is a member of the social group, one acts as one is expected. But membership is predicated on a high degree of commonality, affinity, empathy, and trust. As Stiles (1994) points out:

... It doesn't matter ... whether the individual does better or worse: Cultural rules force him to work for the benefit of the group. Besides, it is in every individual's interest for the group to benefit and survive; without it the individual would perish ... (1994: 439)

Like most of its cultural attributes, social cooperation in the society of intimates thus seems extremely predictable. But obviously this could not be the entire story. There remain in societies of intimates contexts and occasions for individual choice-making under uncertainty. The contrast between these two mechanisms for decision making – one rigid and culturally prescribed, the other open to individual choice – follows in the main a well-known contrast between automated and attended information processing (Posner and Snyder 1974; Schneider and Shiffrin 1977; Schneider 1985; Givón 1989, Ch. 7; *inter alia*). It may be summarized as follows:

(3) Attended vs. automated processing (Givón 1979, Ch. 5; 1989, Ch. 7)

feature	attended processing	automated processing
manner:	conscious, analytic	unconscious
speed:	slow, inefficient	fast, efficient
fidelity:	high error rate	low error rate
context dependence:	high	reduced
informational		
predictability:	low	high
certainty:	low	high certainty
frequency:	low (minority)	high (majority)
cognitive status:	figure	ground

The creation of automated processing, with the attendant rigidified neural pathways, is costly and requires repetition, habituation, reinforcement and learning. Such high implementation costs are only justified for frequently-encountered ex-

perience types. Frequent experience types can thus be processed with high predictability and certainty, since one can predict their interactions, associations, and consequences.

Attended processing – analytic, conscious, slow and error-prone – is reserved for the minority of low-frequency, low-certainty experience types. The automation of such types of experience is unlikely for several reasons:

- First, automation is neurologically feasible only through sufficient repetition, since it depends on repeated use of the same neural connections.
- Second, automation is uneconomical for infrequent experience, since processing a small minority of inputs would not justify the high implementation costs.
- Third, the automation of infrequent experiences would be adaptively dangerous. Their unpredictability requires careful scanning of minute features of context, the weighing of competing alternatives, the computation of comparative probabilities, and the monitoring of unpredictable results.

Culture, we would like to suggest, is a full analogue of automated, habituated, ritualized information processing. As in the case of human language, culturally-ingrained patterns involve some genetically coded and neurologically set universal constraints. But equally, culture also involves elements that are acquired, learned, and automated through lifetime experience. The acquisition of both language and culture reveals an interaction between these two.

When an individual has been socialized, enculturated, habituated into a particular culture, certain automated and neurologically-set biases for viewing and categorizing reality one way rather than any other, and for behaving predictably in conventionalized social contexts, are put in place. That these biases are not absolute is clear from our ability to learn a non-native language, become bi-cultural, or appreciate cross-cultural differences. Still, the rigidity of habituated patterns of culturally-determined behavior should not be underestimated.

Culture must be thus viewed as the adaptive mechanism for automated social decision making about the great bulk of high-frequency social contexts. The balance – small but critical – remains the province of conscious, analytic, “rational” choice under uncertainty.

8. The persistent relevance of the society of intimates

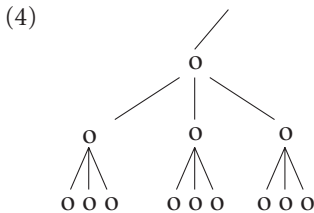
8.1 Historical perspective

As far as can be ascertained, the society of intimates had remained an amazingly stable pattern in primate and human social organization from the dawn of social primates 10 million years ago until the end of the neolithic period ca. 6,000 BC.

Complex societies of strangers began to appear around that time, invariably associated with technological advances such as metallurgy, pottery, and literacy. Almost invariably, the larger social units that sprang up beginning with early the Bronze Age were associated with two profound departures from the economy of foraging.

The hunting adaptation converted its intimate knowledge of the fauna into animal domestication and pastoralism. The gathering adaptation converted its equally intimate knowledge of the flora into plant domestication and cultivation. Both changes precipitated (or made possible) more sedentary settlements, the creation of surplus foodstuff and its storage (whether on the hoof or in the granary), higher population density and, most crucial, larger social units. With long-lasting land improvements, cultivation, irrigation and durable shelter, unambiguous designated ('private') ownership of 'real' property, henceforth held in common by the entire foraging group, became an entrenched cultural phenomenon.

With the increase in the size of the of effective social unit came the classical problems of management, coordination, and hierarchic organization. As a result, the flat, relatively amorphous and usually leaderless governance structure of the society of intimates was converted into well-defined hierarchic structures, schematically given as:



The social-communicative consequences of hierarchic social organization are profound, and may be expressed in terms of the interaction between vertically-adjacent or horizontally-adjacent nodes in schema (4) above:

- **Vertically**, a node interacts, as either leader or governed, only with vertically-adjacent nodes.
- **Horizontally**, a node interacts, as cohort, only with horizontally-adjacent nodes that are governed directly by the same node.

Complex hierarchic organization, once attaining the size of cities, states, kingdoms and empires, harbors a vast potential for alienation and *loss of intimacy*. Leaders ('governing nodes') of relevant units are alienated from all but a relatively small portion of their governed community – their immediate subordinates. Subordinates ('governed nodes') can maintain intimacy only within small, commonly governed units (clan, village, urban neighborhood), but otherwise are alienated from daily contact with other, similarly-isolated *nuclei of intimacy*. Social fragmentation

and lack of intimacy breed mistrust. Invariably, wherever complex societies evolved naturally in human history, non-consensual *coercive governance* arose with them.

It is truly remarkable how little experimentation in consensual government is recorded along the protracted history of complex societies of strangers, be they in Mesopotamia, Egypt, China, India, or the Americas. The few consensual governance experiments in complex societies of strangers are all recorded within the Western tradition, and amount to a frail 200 years in Greece, 100 years in Rome, and the relatively precarious last 200 years of Western Europe and North America – out of the roughly 8,000 year lifetime of the society of strangers.

8.2 The legitimacy of government

The central question of all organized systems of governance remains that of their legitimacy. In the society of intimates, legitimacy was a moot point since governance and cooperation – however rigid their social foundation – was consensual. But governance in the society of strangers is a radically different affair, one at which 10 million years of socio-cognitive evolution fairly bristles. How can one cooperate with non-familiars? How could one cede leadership to those who one neither knows nor loves nor trusts? To those who may not share one's world view, who may be impervious to one's hopes and fears, deaf to one's language? Who neither weep with one's grief nor smile with one's mirth? How could one cede control over one's life to such manifest strangers? Over the course of primate evolution and human history, the answer has been, almost invariably: one could not. The governance of complex societies of strangers has almost invariably been coercive and non-consensual. One didn't cede, one was coopted or coerced.

8.3 Recapturing old evolutionary wisdom

We would like to suggest that, to the extent that a system of governance in the complex society of strangers can be non-coercive, it invariably depends on, or falls back on, the old mechanisms of the society of intimates. So far as can be ascertained, non-coercive societies of strangers have remained viable only when they succeeded in recapturing the intimacy and solidarity of the society of intimates – within relevant spheres of action. In this section we will mention three adaptive – or re-adaptive – mechanisms of *de-alienation*.

8.3.1 *Common cultural perspective*

No culture, however traditional, has ever been 100% homogeneous. All cultures maintain a balance between uniformity and diversity. In this, they resemble biological species and the balance they display between genetic homogeneity and genetic

diversity. In biological populations, the price of excessive homogeneity is a decrease in adaptive experimentation with novel solutions to new environmental challenges. The price of excessive diversity is speciation, and thus the unavailability of new adaptive solutions to the general gene pool (Bonner 1988). Biological populations that neither stagnate nor speciate thus tend to find a middle ground between the two extremes. The same may be said of cultures. To paraphrase A.F. Wallace (1961), a culture is an *organized diversity*. Thus, a certain – high – level of common cultural perspective is a prerequisite for both communication and trust, without which no consensual governance is possible.

All naturally-evolved communication systems, human and pre-human alike, are founded upon shared cultural perspective, a common world-view, shared meaning. And a common communication system, thus shared meaning, is the prerequisite for a consensual, cooperative social order. The concept of multiculturalism is thus, in a profound way, rather incompatible with a workable consensual society.¹⁵ In an immigrant society that is striving to remain consensual, cultural homogeneity may be even more urgent, since such a society strives to create a common perspective from scratch, a process that remains ongoing and fragile.¹⁶

As we argue below, the central injunction of the society of intimates – “you don’t cooperate with a stranger” – indeed survives as a central predictor of social cooperation in complex but still consensual societies of strangers. In such societies, the only alternative to common cultural-linguistic norms is either anarchy and violence (Lebanon, Yugoslavia, Rwanda, Congo) or coercive government (Rome, The Soviet Union, China).

Mechanisms for de-alienation and the creation of common cultural perspective are therefore the lifeblood of a complex but still consensual society.

8.3.2 *Public intimacy*

Public intimacy may sound like an oxymoron, yet it is a major adaptive mechanism in complex but still consensual societies. Until the advent of universal media, geographic separation historically meant, eventually, the linguistic and cultural equivalent of genetic speciation, and thus the loss of even the prerequisite for community. The recapturing of commonality begins with maintaining a common language and culture. But in the absence of the old spatial intimacy, complex cultures have resorted to remote media of communication. This began with literacy and standardized universal education. Next, what used to be face-to-face daily communication and the rubbing of flesh to flesh is replaced by other forms of public, universally-accessible discourse, the media. The media does not only re-homogenize language and world-view, but also contributes – via the universal consumer culture – to the maintenance of external manifestations of shared identity – food, dwelling, dress, hairstyle, art, sports and humor. Such media-driven devices

may be viewed as a move to outflank spatial separation and recapture the major precondition for intimacy and trust – shared values.

8.3.3 *Spheres of intimacy*

Within the complex society of strangers, intimacy, trust and cooperation have of course never died, but rather have become confined to *islands of intimacy* whose members remain in frequent contact – family, friends, congregation, work-place, class, sports team, neighborhood bar, musical band, theatrical cast, etc. Almost any frequent association based on common interests seems to reproduce – and depend on – the old evolutionary pattern of intimacy, personal loyalty, trust and cooperation. Within the complex society of strangers, these islands of intimacy are maintained, created and re-created for the relevant occasion. They make social cooperation possible, and they furnish the considerable emotional support that all social beings apparently expect from their intimates. The techniques and fundamental assumptions of such islands are remarkably like those of the traditional society of intimates.

8.4 Rituals of de-alienation

In the complex society of strangers, one does not talk to a stranger unless one first goes through the protracted rituals of de-alienation: Greetings, introductions, small talk, the sharing of ‘meaningless’ confidences, comparison of backgrounds, of knowledge, interests and self definitions, and the search for common friends, acquaintances, or referents. All these well-known social gambits (Goffman 1974) constitute a search for a threshold of commonality, without which cooperation is inadvisable. Many of the innocuous games of urban living can be understood as rituals of de-alienation, as tactical moves through which one may decide, progressively and with the option to disengage at any time along the way, whether one would like to become more intimate, develop trust, and eventually do business.

8.5 The persistence of the society of intimates

The society of intimates, and the mechanisms through which social cooperation was made possible in it, is not a dead relic of our stone-age or rural past. Rather, it is an amazingly persistent evolutionary adaptation that, with many metamorphoses in new contexts, has retained its adaptive advantage, and has made it possible for complex but still consensual societies of strangers to function as – admittedly somewhat pale imitations of – the old consensual society of intimates.

8.6 Maladaptive features of the society of intimates

So far, we have suggested that the culturally-mediated mechanisms of trust and cooperation found in the society of intimates have proved themselves extremely adaptive in the protracted evolutionary history of that society. We also have suggested that the very same mechanisms have remained operative in consensual complex societies of strangers. We would be remiss, however, if we neglected to point out that the very same adaptive features may on occasion prove rather maladaptive in complex large-scale modern societies.

The Ngóbe insistence on either consensus or paralysis has, for example, proven rather maladaptive in their dealings with the Panamanian bureaucracy, or with representatives of private corporations, both entities which require decisions within limited time-frames.¹⁷

Similar observations can be made about the Ute (and in all likelihood other North American Indian reservations), although the negative impact of such *consensual indecision* on the eventual economic and cultural well-being of the tribe remains a matter of debate. The Utes' historical experience in dealing with the encroaching white society has been, almost invariably, that precipitous action always turns out to be wrong. So their propensity for indecision may yet prove to be an adaptive response.

The Utes' historic distaste for designating and trusting leaders has proved extremely costly in their dealing with the white power structure. Beginning in 1863, the US government had undertaken to "designate" Ute chiefs and then proceeded to negotiate land-cession "treaties" with them, treaties through which the bulk of Ute traditional grounds were lost. In the most infamous – last – incident, a group of such US-designated "chiefs" headed by Ouray, negotiated the final removal agreement,¹⁸ to which the government then held all seven Ute bands responsible. The Utes were then expelled from the remainder of their traditional territory and carted into three small reservations at the margins. Given the Ute tradition of non-leadership, the chiefs' signatures on the agreement were meaningless. In the strange American context, they were binding.

More generally, nepotism, favoritism, clannishness and the proverbial Old Boys' Network may be viewed as extremely natural vestigial traits of the society of intimates. From the perspective of the complex society of strangers such traits may indeed seem undesirable or maladaptive. But from the perspective of the resilient islands of intimacy, such behaviors faithfully reflect the old adaptive maxim:

- (5) No cooperation without trust;
no trust without familiarity.

Likewise, racism and discrimination may seem inimical to the well-being of the complex society of strangers. They nonetheless are natural vestiges of the society

of intimates – now submerged in a vastly expanded social context, the society of strangers. The same is true for stereotyping which, however bothersome, still rests on ancient cognitive foundations (Rothbart and Taylor 1992). However undesirable these vestigial traits may appear to us, they reflect the social reality of a society of strangers. Within such a society, islands of intimacy – and thus of trust and cooperation – may remain small and isolated. General provisions for extending them are neither always efficient nor universally recognized; and strong centrifugal forces may be at work (Orbell et al. 1994).

In holding on to old vestiges of the society of intimates, small cohesive subgroups merely cleave to the tried and true, old adaptive maxim (5). The mechanisms we suggested above – shared meaning, common culture, public intimacy – remain the only mechanisms we know of for extending the nuclei of trust and cooperation in the complex society of strangers, to the point where erstwhile strangers may become de-alienated.

9. What of rational choice?

As we suggested in Section 7 above, there remains a clear adaptive niche for individual conscious – “rational” – choice in all cultural spheres. Such choice persists in the limited, relatively infrequent cultural contexts that have not become culturally conventionalized. Such contexts require slow, deliberate, attended, conscious decision-making. The evolution of culture may be thus viewed as providing for *conventionalizing* the bulk of social contexts, and thus *automating* social decision-making within such contexts. Trust and cooperation within this bulk are seldom a matter of choice, rational or otherwise. Rather, they are themselves conventionalized, automated, and thus become highly predictable. To the extent that laboratory experiments on the cooperation among strangers ignore this reality, they run the risk of rendering their results irrelevant to situated behavior in real social space.

10. Relevance to a theory of causative constructions

One of the most salient features of the consensual societies of intimates is that they leave relatively few contexts of direct coercive manipulation between adult conspecifics. With most contexts for interpersonal cooperation well regulated by cultural conventions, and with leadership being contingent and non-coercive, even recognized ‘leaders’ carry little authority for direct manipulation. As Thomas (1982) puts it:

... a leader is someone who has gained prominence in one of a number of areas, but a leader is not a person who gives orders ... (1982:3)

One prediction that one could venture on the basis of this is that in the society of intimates most manipulative acts among adults will be indirect and non-coercive. Mader (1999) provides an example of this in her study of the Shuar/Achuar way of recruiting raiding party participants:

... Además se refiere a la interdependencia entre el señor de la guerra y sus seguidores: si bien, por una parte, el *maseta uuntri* (señor de la guerra) necesita su apoyo; por otro, permite a los guerreros poner a prueba sus capacidades, y él mismo aumenta su estatus. La ambivalencia de su posición se expresa claramente en este párrafo: mientras un anfitrión, al inicio de la invitación, aparece como *petionario que solicita ayuda* (1), mas tarde aparece como una persona que *permite a los demás participar en un evento importante* y de esta manera es *objeto de su agrado* (2) ...”

(“... Moreover, one refers here to an interdependency between the War Chief and his followers: For indeed, on the one hand, the *maseta uuntri* (War Chief) needs their help; but on the other, he allows the warriors to put their abilities to the test while he himself increases his status. The ambivalence of his position is expressed most clearly in this paragraph: While a host, in initiating an invitation, appears like a *petitioner soliciting help* (1), later on he appears like a person that *permits the others to take part in an important event* and in that way is *an object of their thanks* (2) ... (1999:397; italics added)

Given our description of the workings of societies of intimates, the persistent rise in the languages of such societies of grammatical causative constructions that depict direct, coercive interpersonal manipulation appears, at first blush, a glaring paradox. If intimates do not frequently indulge in direct manipulative speech-acts, why do they grammaticalize them?

The answer to this paradox is, of course, that direct manipulative – causative – constructions are not used in the actual *execution* of direct manipulative speech-acts, but rather in the verbal *depiction* of such acts. One would thus expect the social contexts within which the verbal reporting of manipulative acts take place to be highly predictive of the type and strength of manipulative construction used in the reporting. In more general terms, first:

- i. Actual manipulative speech-acts used between adult conspecifics are unlikely to display many features of direct coercive causative grammatical structure.
- ii. The strength or directness of the causative construction used in reporting manipulative acts will vary according to the *social relation* or *social status* of the reporter and his/her interlocutor.
- iii. The strength or directness of the causative construction used in reporting manipulative acts will also vary according to the reporter's *involvement* – whether

s/he was himself/herself the manipulator, the manipulee, a close relation to either, or a witness on the scene.

- iv. The strength or directness of the causative construction used in reporting manipulative acts will also vary according to the report's *evidentiary status*: Whether the information was directly witnessed, inferred or obtained via hearsay.

The general predictions (ii), (iii) and (iv) above can be now translated into more specific scalar predictions, couched in terms of the probability of using stronger, more direct causative constructions in reporting manipulative acts.

- (6) **Probability of using a strong, direct causative construction in reporting manipulative acts:**
- a. reporting to one's kin/intimate >
reporting to one's non-kin/intimate
 - b. reporting to kin/intimate of manipulator >
reporting to kin/friend of manipulee
 - c. reporting to a lower-status interlocutor >
reporting to a higher-status interlocutor
 - d. reporter is the manipulator >
reporter is the manipulee
 - e. reporting directly-witnessed manipulation >
reporting from inference or hearsay

The factors that underlie these predictions are seldom found in isolation. In actual context, therefore, predictions (6a–e) are likely to interact, producing complex and less-predictable results.

The bulk of the data on causative constructions collected and analyzed by linguists represents the recounting of – talking about – manipulative acts after the fact. It would be most instructive to compare these findings with the speech that occurs during actual manipulative acts in societies of intimates.

Finally, we would like to point out that some of our predictions are already borne out in the highly iconic mapping of the semantic dimension of *causative strength* onto the syntactic dimension of *clause integration* (clause union) along the continuum of verb complementation (Givón 1980, 1990, Ch. 13). The causative constructions at the top of the complementation scale display the highest level of clause integration, code the strongest and most direct causation, and are the most likely to involve a non-human patient as the causee. Toward the bottom of the scale, constructions display lower levels of clause union, code weaker and/or less-direct causation, are more likely to have a human agent as the causee. The relevant major points of this syntactic continuum are reproduced in (7) below.

(7) syntactic scale of clause integration

lexical causative	(She broke the window)
morphological causative	(She en-larged the house)
co-lexicalization	(She let-go of his hand)
non-finite complementation	(She made him leave)
subjunctive complementation	(She asked that he leave)

From our description of the society of intimates, one could draw the very same predictions suggested in Givón (1976, 1990):

- (8) a. The higher a causative construction is on continuum (7), the more likely it is to be used to depict causation over an inanimate, patient-like causee.
- b. The lower a causative construction on continuum (7), the more likely it is to depict causation over a human, agent-like causee, i.e., interpersonal manipulation.

Notes

1. An earlier version of this paper was given at the Symposium on Trust and Cooperation, Institute of Cognitive and Decision Sciences, University of Oregon, November 1994. We wish to thank John Orbell for many helpful comments on earlier drafts, and the late Annette Weiner who, prior to her untimely death, carefully reviewed the Trobriand case materials included in the paper.
2. Most obviously, cross-cultural variation suggests that the actual patterns are not hard-wired at birth. Considerable flexibility is also suggested by bi-culturalism and the possibility of cultural change during the individual's lifetime. It may be argued, however, that some universal constraints on possible diversity of cultural values are genetically coded (Tooby and Cosmides 1992).
3. In this we follow the contrast between the society of intimates and the society of strangers suggested in Givón (1979, Ch. 5).
4. In this, primate and human societies of intimates closely resemble those of other social animals, be they bees, birds, horses or wild dogs.
5. In Athabaskan descent both matrilineal and patrilineal clans are important, but incest taboos are probably stronger toward one's mother's clan.
6. From Givón's unpublished field observations.
7. Mare dominance signals, in terms of ascending aggressive behavior, rank roughly: lowered ears > lowered ears and head > lowered ears and head plus turning back > hind-legs kicking added to the above signals. See discussion in Givón (1991: 105).

8. In deference to the oblique style of transacting new information, we will refrain from explicitly identifying the exact communal deliberative bodies from which these observations are derived.
9. As we shall suggest further below, this feature of consensual decision-making in societies of intimates can be quite maladaptive in dealing with the organized governmental bodies of the dominant, encompassing society of strangers.
10. Splintering is also a well-known mechanism in primate societies, and is often a mechanism for limiting group size. Thus, for example, Japanese Macaque troupes splinter when the size of the group exceeds what the habitat can support. Macaque groups thus seldom exceed 150–200 members. But the mechanism for such splintering may well involve dissention and leadership disputes.
11. An informed estimate suggests that 7,000 to 10,000 Utes controlled the western half of Colorado and the eastern half of Utah, i.e., the entire top of the Rocky Mountains. At the time of the early Spanish encroachment (1600s), seven named bands were recognized. But only one division, that of the Uintah band in No. Utah, had any linguistic consequences, and even those remain minimal. The bands were not alienated from each other, but rather considered themselves the same people, interwoven by exogamous marriage and other manner of population flow. In contrast, with the exception of the related Numic tribes to the west and north west (Shoshone and Paiute), relations with all other neighbors in a wide arc to the north, east and south were hostile (Crow, Cheyenne, Arapaho, Kiowa, Comanche, Navajo). See Jorgensen (1972), Jefferson et al. (1972).
12. Over the harsh winter months, Ute bands often splintered into smaller family groups, since the terrain could not support a large foraging population. But summer hunting expeditions as well as hostile raids also involved splintering into smaller groups for protracted periods. The re-gathering of the bands at the end of winter was the occasion of the major traditional social-and-spiritual ceremony of the Utes, the Bear Dance. In the case of the Ngóbe, little travel between the small isolated hamlets occurs during several months at the height of the rainy season. Major traditional rituals that reaffirm intimacy are held during the dry season, when large groups gather at predetermined locations. Re-affirmation rituals upon reuniting, even after short physical separation, are well known in primate and canine societies (de Waal 1982; Power 1992; van Lawick-Goodall and van Lawick (1971).
13. It is worth noting that we made our observations of the Utes (Givón) and Ngóbe (Young) independently and before we knew each other.
14. When kinsmen dispute among themselves, something that does occur, the resolution takes place within the family and is not brought to a public forum.
15. The original meaning of 'consensus' was, after all, *shared meaning*.
16. Israel is probably the most extreme example of such a society, where the most urgent initial task was – and still remains – that of linguistic acculturation.
17. Some Ngóbe have recognized the inefficiency of their traditional decision-making process in the context of interface with the dominant society's agents, and have attempted to develop new institutional forms to cope with these non-traditional contexts of decision-making. (Bort and Young 1985; Young and Bort 1979).

18. By an act of Congress, treaties with Indians had been downgraded to “agreements,” the latter presumably easier to break. See Jefferson et al. (1972:29–43).

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Verbs of interpersonal causality and the folk theory of mind and behavior*

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Psychologists and linguists have studied “interpersonal verbs,” which describe how one person affects another. In both disciplines, classifications of these verbs as well as studies of the verbs’ causal implications (dubbed the “implicit verb causality effect”) have not included sufficient attention to people’s folk theory of mind and behavior, a conceptual framework that underlies the semantics and social function of these verbs. This chapter offers a classification of interpersonal verbs and an analysis of their causal implications that are both grounded in people’s folk-conceptual framework.

Interdisciplinary work in linguistics, philosophy, and psychology has long supported the view that human language encodes fundamental cognitive categories, such as the Kantian concepts of time, space, and causality. Causality, the focus of this volume, is encoded in a variety of linguistic structures, including word semantics, morphemes, prepositions, and periphrastic constructions (e.g., Comrie & Polinsky 1993; Dirven 1995; Frawley 1992; Givón 1975; Shibatani 1976). Psychological research has focused in particular on causality encoded in “interpersonal verbs” – transitive verbs that are used to describe how one person affects another, such as when Anne helps Paul or Holly dreads Aaron (Brown & Fish 1983; Garvey & Caramazza 1974).

Researchers have struggled with two problems surrounding interpersonal verbs. The first is to provide a satisfactory classification of these verbs. Some classifications seem deceptively simple (e.g., active vs. stative verbs), while others postulate numerous ad-hoc categories (e.g., agent-evocator verbs vs. agent-patient verbs) merely to satisfy empirical data patterns. A first goal of this chapter is to lay the conceptual groundwork for classifying and interpreting interpersonal verbs, and perhaps psychological verbs in general.

The second problem surrounding interpersonal verbs is to provide a theoretical account of their patterns of causal implications – i.e., what sorts of causal re-

lations they seem to imply. These causal implications have been studied mainly by psychologists, who framed the problem in terms of the oft-used dichotomy between internal (person) causes vs. external (situation) causes. This dichotomy was anchored in the verb subject such that an interpersonal episode could be caused by the person corresponding to the verb subject (internal attributions of causality), as in *Anne helps Ben because she ...*, or an episode could be caused by the person corresponding to the verb object (external attributions of causality), as in *Anne dreads Ben because he ...* Different classes of interpersonal verbs, it is claimed, lead to distinct patterns of causal attributions, and this phenomenon has been labeled the “verb causality effect” (for a review, see Rudolph & Försterling 1997). A second goal of this chapter is to show that past research on the verb causality effect confounded the *causal relations* depicted by the verbs with people’s *explanations* for these relations. I will propose a framework that accounts for causal as well as explanatory patterns.

All my examples will come from English. However, to the extent that my theoretical analysis has validity, it should apply to other languages as well.

1. The classification of interpersonal verbs

Linguistic work introduced a well-known distinction between two main verb classes – *actives* and *statives* (Lakoff 1965; see also Chafe 1970; Fillmore 1968). Frawley (1992) offered a variety of criteria that separate these two classes: Actives (e.g., He *stole* a book) denote processes, something somebody does (often intentionally), whereas statives (e.g., She *knows* French) are continuous and can be attributed but not executed. These two classes, however, seem overinclusive. Actives subsume both observable acts (e.g., He *stole* the book) and unobservable/mental acts (e.g., He *listened* to the music); and statives subsume both occurrent states (e.g., She *saw* the picture) and dispositional qualities (e.g., Bill *knows* French). Jackendoff (1983, 1985) tried to sharpen the concept of actives by restricting the “major ontological category” of action to observable events (captured by “You’d better not do *that* around here!” [pointing to it]), but this decision still leaves open what ontological category *mental* act verbs pick out (e.g., *imagine*, *listen*, *attend*, *figure out*).

In the psychological literature, the active-stative distinction was also adopted but made somewhat more precise. Interpersonal verbs were said to depict a causal process or transaction that occurs between two people, but in one class of verbs this process is depicted as an *action* one person performs vis-à-vis another and in a second class the process is depicted as a *mental state* one person has as a result of another. Accordingly, Brown and Fish (1983) classified interpersonal verbs into

action verbs and *state verbs* (see also Rudolph & Försterling 1997). Action verbs reference an “agent” (in the syntactic subject position) who behaves such as to causally influence a “patient” (in the object position), and examples of such verbs include *to help*, *to cheat*, *to hit*. State verbs reference an “experiencer” (in the subject position) whose mental state is brought about by a “stimulus person” (in the object position), and examples of such verbs include *to like*, *to loath*, *to notice*.

Several psychological researchers further broke down state verbs into “experiencer-stimulus” and “stimulus-experiencer” verbs (e.g., Brown & Fish 1983; Schlesinger 1992), and some broke down action verbs into “agent-patient” and “agent-evocator” verbs (Au 1986; Rudolph & Försterling 1997). Both breakdowns were meant to accommodate two surprising findings of verb causality implications. First, whereas many state verbs elicited, as predicted, causal attributions to the verb object (“Sue recognized Harry because *he* ...”), some elicited attributions to the verb subject (“Sue amazed Harry because *she* ...”). The latter were called stimulus-experiencer (S-E) verbs because they mentioned the stimulus person before the experiencer, and the classic state verbs were called experiencer-stimulus (E-S) verbs because they mentioned the experiencer before the stimulus person. Second, whereas most action verbs elicited, as predicted, causal attributions to the verb subject (“Sue hit Harry because *she* ...”), some elicited attributions to the verb object (“Sue praised Harry because *he* ...”). The latter were called agent-evocator (A-E) verbs because they described an agent whose action was evoked by someone else, and the classic action verbs were called agent-patient (A-P) verbs because they described an agent causing a patient.

Despite these attempted refinements, the traditional classification system of interpersonal verbs has various problems. Minor ones include the confounding of occurrent states (She *noticed* him) and dispositional states (She *likes* him). A more serious problem is the lack of an independent theoretical grounding for the broad classifications and the finer breakdowns. Without such grounding, it can be difficult to apply the classification system with any consistency. For example, “A *betrayed* B” is typically classified as an AP verb, whereas “A *deceived* B” is typically classified as a stimulus-experiencer verb (e.g., Brown & Fish 1983), with no justification why. Moreover, the lack of theory makes it difficult to actually derive predictions about verb causality implications and equally difficult to clarify contradictions within empirical data.

There is no doubt that traditional classifications of interpersonal verbs captured a kernel of truth – there is surely something fundamentally different about actions and mental states. However, this fundamental difference remains unilluminated if we merely look at large numbers of verbs and argue about their class membership. Instead, we must examine what major verb classes there could and should exist in light of the semantic and social functions verbs have to serve in social interaction. From these considerations we can postulate socially relevant event classes

for which we should be able to find corresponding verbs. The causal implications of these verbs can then be derived theoretically from features of the event classes rather than constructed ad-hoc from the patterns of verbs studied. This approach is particularly fruitful for a well-defined domain such as interpersonal verbs, so I will focus my effort on this domain.

2. Folk concepts underlying interpersonal verbs

Under the assumption of cognitive semantics – that words for certain phenomena reflect central human concepts for these phenomena – verb classes depicting interpersonal events should be significantly related to people’s conceptualization of interpersonal behavior itself. This conceptualization is laid down in what has been variously called people’s “folk theory of behavior,” “theory of mind,” or “folk psychology” (e.g., Fletcher 1995; Greenwood 1991; Malle 1997; Perner 1991; Wellman 1990). If we want to carve verb classes at their “natural joints” and understand their semantic properties, we must understand what these verbs stand for – that is, what concepts underlie people’s thinking about actions, mental states, and related “behavioral events.”¹ This way, regularities of verbs may be derived from regularities of people’s thinking about human behavior.

The concepts of intentionality and observability provide an ideal starting point for identifying the folk theory underlying people’s thinking and talking about behavioral events, because the two concepts figure prominently in people’s perceptions and explanations of human behavior and personality (Malle & Knobe 1997a, b; Malle 1999). People show impressive agreement when judging the intentionality of verbally described behaviors, and they converge on a complex definition of intentionality (Malle & Knobe 1997a). Similarly, the observability of behaviors is an important factor in social perception (e.g., Andersen & Ross 1984; Funder & Dobroth 1987; John & Robins 1993). And considered jointly, intentionality and observability help predict which behavioral events people pay attention to during social interaction and tend to explain (Malle & Knobe 1997b; Malle & Pearce 2001).

The literature on interpersonal verbs made at least indirect reference to these two concepts (whereby intentionality was often labeled voluntariness). In their review, Rudolph and Försterling (1997, p. 193), closely following Brown and Fish (1983, p. 242) define action verbs (“to do”) as depicting (a) “behavioral interactions typically involving voluntary muscles” that are (b) observable. By contrast, they define state verbs (“to experience”) as depicting (a) “mental interactions resulting in relatively involuntary states” that are (b) unobservable. Most authors heeded similar definitions. For example, the imperative test (e.g., Brown & Fish

1983; Frawley 1992) has been used to determine intentional control for action verbs, and Jackendoff (1985) argued that the issue of intent only arises for actions (which he also considers to be observable).

Thus, the two distinctions of (un)intentionality and (un)observability capture people's own distinctions of behavioral events, and they suggest a simple 2×2 classification (Fig. 1). This classification includes the previously studied "actions" and "experiences" in the diagonals and two other behavioral event types in the off-diagonals.

Verbs of "action" refer to intentional and observable events. These events can involve a single person, as in *A writes, jogs, showers, or cooks*, or they can involve two people, in which case they are described by interpersonal action verbs: *A hits, kills, talks to B, or gives B a book*. Actions make up about 36% of behavioral events people attend to in social interaction (Malle & Pearce 2001).²

Verbs of "mere behavior" refer to unintentional and observable events. They seem to denote more often single-person events, such as *A is shivering, cried, or ran into the glass door*, and less often interpersonal events, such as *A stumbled over or ran into B*. Overall, mere behaviors make up about 23% of behavioral events people attend to (Malle & Pearce 2001).

Verbs of "intentional thoughts" refer to intentional and unobservable events, which make up only 6% of behavioral events people attend to (Malle & Pearce 2001). Examples involving a single person include *A searches for things to say, imagined a giraffe, was deciding about the job offer*. Intentional mental states that involve another person are even rarer, such as *A listened to or thought about B*. Most important, this involvement is not always causal, as *A* can think about *B* without *B* causing it.

Finally, "experience" verbs refer to unintentional and unobservable events, such as *A is nervous, was feeling angry, or enjoyed the meal*. Experiences can also involve another person, such as *A noticed, heard, saw, or was angry at B*. Overall,

	INTENTIONAL	UNINTENTIONAL
OBSERVABLE	actions	mere behaviors
UNOBSERVABLE	intentional thoughts	experiences

Figure 1. Classification of behavioral events according to the folk concepts of intentionality and observability

experiences make up about 35% of behavioral events people attend to (Malle & Pearce 2001).

I will now try to show how this framework of behavioral event types brings order to classifications of interpersonal verbs and allows us to derive the causal relationships underlying these verbs.

3. Interpersonal verbs

Interpersonal verbs denote interpersonal episodes in the strict sense – i.e., they denote causal transactions or processes that go on between two people, or more specifically, episodes in which one person causally affects another. A theoretical (i.e., prelinguistic) analysis of such episodes must distinguish between the *causer* (the person who instigates the interpersonal process) and the *causee* (the person in whom a change occurs as a result of the interpersonal process).³ Furthermore, we can break up the interpersonal process into the *causing event* instantiated by the causer and the *resulting event* instantiated by the causee. Verbs can then denote the causing event (e.g., A *hit* B) or the resulting event (e.g., A *noticed* B) or potentially both (e.g., A *frightened* B).

Which types of behavioral events, using the classification in Fig. 1, will people identify as *causing events*? In most speech communities, these will be publicly observable events, which initiate a causal process between one person and another. Unobservable events cannot normally provide the (physical) impact necessary to effect a result in the causee. (Interesting exceptions may be communities that believe in psychokinesis or voodoo, which would introduce a special class of unobservable causing events.)

Which types of behavioral events will people identify as *resulting events*? These must normally be unintentional to be feasible results of someone else's (the causer's) behavior because intentional behaviors are seen as directly caused by the agent's own intention (Malle & Knobe 1997a).

Thus we arrive at two simple rules of interpersonal episodes that verbs depicting those episodes must obey:

- I. Behavioral events that are *causing events* must be publicly observable.
- II. Behavioral events that are *resulting events* must be unintentional.⁴

From these rules we can derive predictions about which specific behavioral events can be causing or resulting events, which interpersonal verbs should exist, and what causal implications these verbs should have.

Actions, which are observable and intentional, meet rule I and violate rule II, so they can only be causing events. Interpersonal action verbs should exist in abun-

dance because many social transactions require one to communicate about action, as in warning, promising, predicting, explaining, praising and blaming. The causality implications of interpersonal action verbs are straightforward. Causality runs (by definition) from causer to causee and will therefore be ascribed to the causer. To the extent that action verbs put the causer in the subject position (which appears to be a linguistic universal), interpersonal action verbs will lead to causal attributions to the verb subject. (Alleged exceptions to these causal attributions, which led some researchers to postulate the “agent-evocator” verb class, will be addressed later.)

Mere behaviors, which are observable and unintentional, meet both rules I and II, so they can be either causing or resulting events. Interestingly, interpersonal verbs of strict mere behavior are rare, perhaps because such verbs do not pin down significant social transactions. Moreover, the few verbs that do exist appear to be exclusively causing events and appear to be intentional acts that went astray (the reader is invited to add to this short list: *collide with*, *run into*). The causality implications of interpersonal verbs for mere behaviors should also be straightforward: If the verb depicts a behavioral event that *can* be intentional (whether or not it is in fact intended in the particular context), it violates rule II and can only refer to a causing event (e.g., A *annoyed*, *scared* B). In, principle, if the mere behavior is necessarily unintentional, it could be a resulting event, but I have been unable to identify mere behavior verbs in English (or German) that depicted interpersonal resulting events. It appears that, in the interpersonal domain, mere behavior verbs capture variants of action events (doings that deviate in intentionality) rather than variants of experience events (results that deviate in observability).⁵

Intentional thoughts, which are unobservable and intentional, violate both rules I and II, so they can be neither causing nor resulting events. Interpersonal verbs denoting intentional thoughts should therefore not exist (barring acts of psychokinesis and voodoo). Verbs that may on the surface look like interpersonal intentional thoughts, such as A *imagined* B’s face, A *listened to* B, or A *is thinking about* B, are not interpersonal verbs proper, because of the strict requirement that such verbs depict a process in which the causer effects some change in the causee.

Experiences, which are unobservable and unintentional, violate rule I and meet rule II, so they can only be resulting events. Verbs denoting interpersonal experiences (e.g., *notice*, *dread*) should therefore exist in any language, and the features of unobservability and unintentionality provide the defining criteria for these verbs. Causality should be typically ascribed to the verb object, because causality runs from causer to causee and the causer is typically depicted by the verb object (She *noticed* him). However, the literature has identified some experience verbs that place the causer in the subject position (see Moreno-Cabrera 2000), so a further discussion of experience verbs is needed, to which I turn next.

4. Clearing up experience verbs

Both the linguistic and psychological literature distinguish between two types of experience verbs, sometimes labeled “experiencer-stimulus” and “stimulus-experiencer” verbs (e.g., Brown & Fish 1983; Hoffman & Tchir 1990; Moreno-Cabrera 2000; Postal 1971; Rudolph & Försterling 1997; Schlesinger 1992). Typically cited examples of experiencer-stimulus verbs include E *likes, loathes, noticed, remembers, fears, pitied, enjoyed* S, designating the “experiencer” (causee) in the syntactic subject role and the “stimulus” (cause) in the syntactic object role. Typically cited examples of stimulus-experiencer verbs include S *astonished, influenced, frightened, shocked* E, designating the “experiencer” (causee) in the syntactic object role and the “stimulus” (cause) in the syntactic subject role.

When we apply the strict definition of interpersonal verbs to these routinely used verb lists, however, several verbs cancel out. Among the class of experiencer-stimulus verbs, the oft-cited verbs *like, loathe, admire, fear* do not denote causal processes or transactions *between* two people; rather, they denote one person’s evaluative attitude toward another. Moreover, when used in present tense (A likes or fears B), these verbs depict stable attitudes clearly distinct from episodes or events (which have a temporal dynamic; Frawley 1992; Givón 1984).

Other verbs often grouped in the experiencer-stimulus category include E *remembers, obsesses over, thinks about* S. These verbs, too, do not denote causal transactions between two people but rather one person’s cognitive state that has another person as its representational content. Both these cognitive verbs and the attitude verbs just mentioned point to a conceptual scheme of *perceiver-object*, which corresponds to a core assumption of folk psychology: that persons are not only intentional agents acting on the world but also have minds with which they (actively) represent and evaluate the world (Perner 1991; Wellman 1990).

After these cancellations, strictly interpersonal verbs of the experiencer-stimulus type are limited to perceptual state verbs, such as E *hears, saw, notices, understood* S. The subject position of the experiencer again refers to the conceptual category of perceiver, but perception is arguably caused by the stimulus object (as described in the philosophical tradition of causal theories of perception), and if the object is a person, an interpersonal causal process is described.⁶

The second class, that of stimulus-experiencer verbs, also includes misfits. For one, verbs such as *deceive, influence, or uplift* do not clearly depict the experiencer’s experience but the stimulus person’s behavior. Other dubitable stimulus-experience verbs include S *interests, fascinates, intrigues, or matters to* E because these verbs fail to denote a causal transaction but rather capture an evaluative attitude that E holds about S.⁷

Finally, S-E verbs that do depict an interpersonal causal transaction may actually have two readings (Iwata 1995): When we say that S *amused, disappointed, sur-*

prised, or *frightened* E, we may refer to what S did (namely, something that amused or disappointed E) or we may refer to E's resulting experience (of being amused or disappointed). This dual reading is good evidence for the transactional nature of these interpersonal verbs – pointing to the entire episode from the causer's behavior to the causee's resulting experience. Perhaps for this reason we should sort the heterogeneous group of S-E verbs into the more clear-cut classes suggested earlier (action, mere behavior, experience) and into a class of "transactional verbs," which can have intentional or unintentional readings. The causal implications of such transactional verbs should be unproblematic because the causer is always in the subject position, modeled after the paradigm case of action verbs.

To sum up, interpersonal experience verbs are rare once we cancel out the misfits (that do not depict causal transactions or temporally concrete events). The remaining class consists of perceptual experience verbs that are modeled after the perceiver-object scheme and place a person with a representing mind into the verb subject position. These should be the only interpersonal verbs in which the causer is unambiguously in the object position. Many of the so-called stimulus-experiencer verbs cancel out as well (because they are action or mere-behavior verbs), and the remaining ones might have to be regarded as transactional verbs that depict both the causer's behavior and the causee's resulting experience.

4.1 Empirical studies

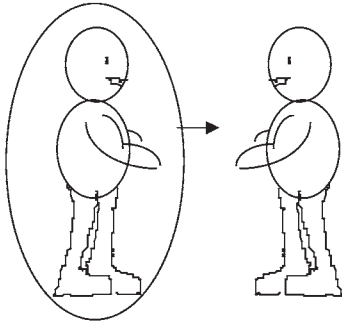
I now turn to empirical data that examine the claims I have made so far and take up the question of "causal implications" hypothesized for the various interpersonal verb classes. In a series of studies, I presented groups of participants with a list of 40 distinct subject-verb-object sentences (used in the literature) and asked them to judge either the event's *intentionality* ("whether it was done on purpose"; yes-no, N = 12); its *observability* (yes-no, N = 12); or the event's "*location*" (N = 30). For the location task (which was meant to assess the event category depicted by the verb), each sentence was accompanied by a drawing that generically depicted the first person (A) and the second person (B) facing each other, and participants marked in the drawings whether the event described something in A's mind, in A's behavior, in B's mind, or in B's behavior (see Figure 2). In addition, 16 more participants were asked to read all the verb sentences and explain *why* each event happened (on an empty line, beginning with *Because* next to each sentence), a common method to elicit the "causal implications" of interpersonal verbs (e.g., Brown & Fish 1983; Au 1986). Two sets of coders classified the explanations using two different coding schemes, described in more detail below. For now, I discuss the results for 20 experience verbs (10 traditional E-S verbs⁸ and 10 traditional S-E verbs) along with the average action verb as a comparison standard (see Table 1).

Table 1. Event attributes, event categorizations, and causality implications of 20 experience verbs, along with average action verb

Action verbs	Event attributes			Event categorization			Subject causality
	Purposeful	Observable	Beh1	Exp1	Exp2	Transaction	
Experimenter-stimulus verbs	85%	86%	87%	7%	5%	2%	43%
Kareem dreaded Judy	28%	12%	3%	92%	1%	3%	21%
Lori enjoyed Jeff	42%	17%	0%	97%	0%	3%	20%
Mary noticed James	33%	33%	3%	86%	3%	7%	14%
Maya understood Ian	25%	8%	3%	93%	3%	0%	7%
Nathan trusted Evelyn	25%	8%	0%	93%	3%	0%	33%
Ray envied Ellie	42%	0%	7%	93%	0%	0%	20%
Ronald heard Cheryl coming	25%	0%	0%	100%	0%	0%	25%
Sandra appreciated Carl	17%	50%	10%	73%	0%	13%	13%
Traci feared Ben	33%	0%	0%	97%	3%	0%	6%
Vern recognized Anne	17%	0%	0%	97%	0%	3%	27%
	17%	0%	3%	93%	0%	0%	43%
Stimulus-experimenter verbs	22%	22%	30%	6%	48%	16%	72%
Anne amazed Vern	8%	25%	20%	10%	57%	13%	75%
Ben amused Traci	17%	50%	47%	3%	30%	20%	73%
Carl bored Sandra	0%	0%	10%	7%	70%	13%	73%
Cheryl deceived Ronald	83%	8%	47%	23%	17%	13%	80%
Fred disappointed Ona	8%	0%	20%	3%	63%	13%	81%
Evelyn frightened Nathan	33%	58%	50%	3%	27%	20%	79%
Fran irritated Mick	0%	17%	30%	7%	50%	13%	69%
James surprised Mary	42%	50%	40%	0%	40%	20%	45%
Jeff impressed Lori	8%	8%	17%	3%	60%	20%	81%
Judy inspired Kareem	17%	0%	17%	3%	67%	13%	63%

Note: Beh1 = behaviour of first person; Exp1 = experience of first person; Exp2 = experience of second person

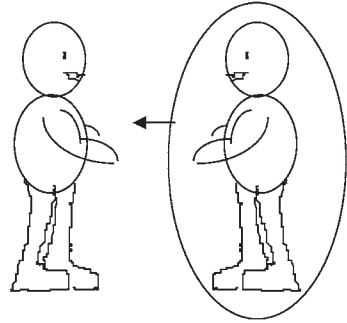
If you think that the verb describes something that A does:



A

B

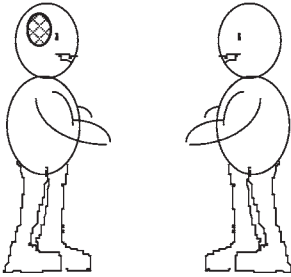
If you think that the verb describes something that B does:



A

B

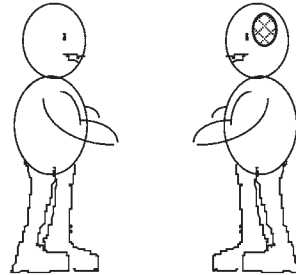
If you think that the verb describes something that goes on in A's mind:



A

B

If you think that the verb describes something that goes on in B's mind:



A

B

Figure 2. Instructions to event categorization task

The average results per verb type (in boldface) clearly distinguish, as expected, experience verbs from action verbs – both experience verb types are low on intentionality and observability whereas action verbs are high on both. In addition, there were some notable exceptions. Among E-S verbs, those that depict attitudes (e.g., *dreaded*, *trusted*, *appreciated*) had slightly higher intentionality ratings than those that depict perceptual states (e.g., *heard coming*, *noticed*, *recognized*). In addition, *heard coming* was perceived as observable by half of the subjects, and *enjoyed* was perceived as observable by a third. Among S-E verbs, *deceived* was seen by most as intentional, and *surprised* and *frightened* were seen by at least a third as inten-

tional. *Frightened*, *amused*, and *surprised* were also seen as observable by at least half of the subjects.

The data on event categorizations (event “location”) reinforce the above exceptions. Most E-S verbs were classified by over 90% of participants as experiences in the first person; the two verbs that had somewhat lower rates (*heard coming* and *enjoyed*) were considered by some participants as transactions (referring both to the causer’s behavior and the causee’s resulting experience, as in). S-E verbs were far more variable. Six S-E verbs (*amaze*, *bore*, *disappoint*, *impress*, and *inspire*) were seen by more than 50% of participants as depicting the second person’s experience and by only 10–20% of participants as depicting the first person’s behavior; these verbs may be justifiably called *experience* verbs. By contrast, three S-E verbs (*amuse*, *deceive*, *frighten*) were seen by 47–50% of participants as depicting the first person’s behavior and by only 17–30% as depicting the second person’s experience; these are not paradigmatic experience verbs but rather action or mere behavior verbs.

Interestingly, every single S-E verb was interpreted by 13–20% of participants as a transaction – depicting *both* the first person’s behavior and the second person’s experience. This duality of S-E verbs can also be illustrated by the fact that many of them change their reading as either behaviors or experiences in response to adverbial or other modifiers (see Iwata 1995). Consider “Stephen deliberately amused, bored, frightened, irritated, inspired Maya” – highlighting Stephen’s action – in contrast to “Stephen deeply amused, bored, frightened, irritated, inspired Maya” – highlighting Maya’s experience.

4.2 Excursion: *Amaze* and *amuse*

As a further exploration of the distribution of these dual roles of S-E verbs (depicting either one person’s causing behavior or the other person’s resulting experience), I selected two verbs, *amaze* and *amuse*, and examined their patterns of use in written texts. I searched the NEXIS database (containing general articles from a large number of newspapers and magazines), aiming for about 150 codeable occurrences of each verb requiring a search span of two months for *amuse* and one month for *amaze*). The verb forms fell into four broad classes shown in Table 2: active verb phrases (intransitive or transitive), which syntactically highlight the agent’s or object’s behavior of amazing/amusing (“behavioral” emphasis); and participial adjectives (with or without prepositional complement) which syntactically highlight the person who experiences amazement/amusement (“experiential” emphasis). In addition, I separated out the interpersonal uses within each class: transitive verbs with agents in the subject and object positions (e.g., “I used to amuse my incredulous students with stories . . .”) and participial adjectives with complements that refer to another person (e.g., “So each can be amused by the others . . .”).

Three conclusions can be drawn from the use pattern of the two verbs in Table 2. First, across both verbs a greater proportion of uses displayed an experiential emphasis ($M = 69\%$), directly referring to the mental state of the one who is amazed or amused. At first glance, this pattern appears to justify the classification of S-E verbs as experience verbs, but upon further consideration it suggests that the more typical (and unambiguous) way of depicting the relevant experience is by using the participial adjective, not the verb phrase. The verb phrase (especially with transitive verbs) may have the special function of highlighting the behavior that caused the experience.

Second, the verb *amaze* showed an even greater preponderance of experiential emphasis (75%) than the verb *amuse*. In the earlier questionnaire data, *amaze* was also more often judged a genuine experience event. We might speculate that the very S-E verbs that are most judged as experience verbs in their transitive form are least often used in this form.

Third, the specifically interpersonal S-E verb forms (S *amazed*, *amused* E, where S is a person) make up only 5–15% of all uses. Whichever way one interprets the structure of S-E verbs, it must be acknowledged that their actual use is quite infrequent. Because there are more direct ways to denote a person's experience, the interpersonal S-E form may well have the specific function of turning the audience's attention from the mere experience of one person to the whole interpersonal transaction.

4.3 Causal implications

The questionnaire data also allowed coding for the verbs' causal implications. Following traditional procedures (e.g., Brown & Fish 1983; Au 1986), two coders classified the surface referent of the explanation as either the verb subject or the verb object. For example, for "Mary noticed Jeff. Why?" an explanation such as "Because Jeff was cute" is coded as *object causality* (referring to Jeff, the verb object), whereas "Because she likes him" is coded as *subject causality* (referring to Mary, the verb subject). The coders reached a reliability of 91% ($\kappa = .83$) for this classification.

As shown in Table 2, E-S verbs mostly elicited object causality (i.e., low subject causality) while S-E verbs often elicited subject causality (setting aside 4% of responses that referred to both subject and object or to external factors). These classifications, however, were hardly correlated with the event categorizations reported earlier: Among E-S verbs, subject causality correlated at $r = .25$ with the rate of exp2, and among S-E verbs, subject causality correlated at $r = -.01$ with the difference between beh1 and exp2.

If answers to why-questions really capture causal implications, should they not be related to the fundamental event structure of actions, behaviors, and ex-

Table 2. Patterns of linguistic use for stimulus-experiencer verbs *amaze* and *amuse*

	“Behavioral” emphasis (Intransitive and transitive verb phrases)			“Experiential” emphasis (Participial adjectives with or without prepositional complement)		
	<i>X amazes</i>	<i>X amazes me;</i> <i>A amazed P</i>	Sum	<i>A is amazed</i>	<i>A is amazed</i> <i>at/by/that etc.</i>	Sum
	N					
<i>Amaze</i>	3%	22%	25% [5%]	17%	58%	75% [5%]
<i>Amuse</i>	9%	27%	36% [15%]	28%	36%	64% [14%]

Note: Numbers in square brackets refer to interpersonal uses, as a percentage of all occurrences of that verb.

periences? Yes and no. On the one hand, answers to why-questions do reflect the primary causal flow from causer to causee; and because the ordering for E-S verbs is causee-verb-causer but for S-E verbs it is causer-verb-causee, we see far more subject causality in S-E verbs than in E-S verbs. On the other hand, answers to why-questions are *explanations*, which reflect not only the causal flow inherent in the interpersonal event itself but also the factors leading up to this event. For example, most people (93%) indicated that the episode “Vern recognized Anne” refers to a mental state that Vern had. At the same time, 43% of subjects referred to Vern when answering *why* he recognized Anne. If taken as a strict causal description of the event, this would make little sense because Vern causes nothing in Anne with his recognition. If taken as an explanation, however, it does make sense to mention Vern because Vern’s recognition may have been facilitated by, say, his attentiveness or ability to remember faces. Similarly, “James surprised Mary” was frequently explained by something about Mary – not as a simple cause that reversed the James→Mary transaction structure but as a reason that James had to (intentionally) surprise Mary, as in “Because it was her birthday.”

Thus, we need to distinguish between the causal transaction of the interpersonal episode itself and the causal factors that preceded this transaction. The transaction is coded in the verb’s event category (e.g., experience verbs refer to the results of a causer-causee transaction; action verbs refer to what the causer does in the transaction). The factors that preceded the transaction are expressed in explanations, clarifying the sometimes complex background for why the transaction came about and what made it sensible. Such explanations will often focus on the causer but sometimes include reference to other factors as well. The difference between causal transaction and explanation is categorical in that no competent speaker could maintain that in “Maya understood Ian” Maya somehow caused something in Ian, but competent speakers may explain her understanding by pointing either to her own efforts at comprehension or to Ian’s efforts at clarity.

We can draw two main conclusions from our analyses of experience verbs. First, verbs previously treated as experience verbs are a heterogeneous group. Theoretically, we can define such verbs as depicting events that are low in intentionality, low in observability, and are seen as located in an affected person’s mind. The clearest exemplars according to these criteria are perceptual and emotional verbs (*notice, understand, recognize, fear*), which put the experiencer in the subject position. The next clearest exemplars include verbs such as *bore, disappoint, or inspire*, which likewise have low intentionality, low observability, and are interpreted by 60–70% of people as depicting an experience of the person in the object position. There are also several verbs previously classified as experience verbs that strictly are not experience verbs – because their intentionality or observability is too high (e.g., *trust*), because they depict the causer’s behavior (e.g., *deceive, frighten, amuse*) or because they depict the transaction between causer and causee (e.g., *irritated, sur-*

prised). All of these excluded verbs still refer to some part of a causer-causee transaction (in accordance with the definition of interpersonal verbs), but they do not pick out the causee's resulting experience by itself.

Second, what has previously been called "causal implications" of interpersonal verbs are really *explanations* that are constrained by the causal transaction of the depicted event itself. But explanations go beyond the simple causer→causee transaction; they cite factors that precede, clarify, and make sensible the entire interpersonal episode. In general, speakers are more likely to explain an interpersonal experience by citing something about the causer. However, mentioning something about the experiencer is also compatible with the causal structure of the depicted transaction. For suppose we specifically select experience verbs that tend to be explained by an attribute of the experiencer (e.g., "Amelie *grasped* Brian's difficult argument because she ..."). Finding that speakers frequently explain such verbs by reference to the experiencer would in no way contradict the assessment that the verb picks out an experience that is the result of a causer→causee transaction.

The distinction between the causal transaction inherent in a depicted event and its explanation is even more important for the analysis of action verbs, to which I turn next.

5. Clearing up action verbs

The previously derived rules for interpersonal episodes predict that action verbs denote causing events that are intentional and observable and are seen as actions performed by the verb subject. In addition, the literature suggests that action verbs have causal implications that refer to the verb subject. All of these predictions should be easily confirmed. However, there is a puzzle in the literature as well. Most action verbs (e.g., *A cheats, flatters, telephones, protects* P) indeed show subject causality attributions; but some action verbs (e.g., *A congratulates, hires, praises, sues* P) show object causality attributions. Researchers were puzzled by these exceptions (first documented by Au 1986), and subsequently some refrained from studying action verbs (e.g., Brown & Van Kleeck 1989; Van Kleeck, Hillger, & Brown 1988). Most important, the contradictory data have never been explained. Researchers merely labeled the two subtypes of action verbs differently – those that showed the expected subject attributions were labeled "agent-patient" verbs, and those that showed the expected object attributions were labeled "agent-evocator" verbs. But of course this labeling does not explain the contradiction. To clarify this puzzle surrounding agent-evocator verbs I now turn to the results for 20 action verbs examined in the same studies as the experience verbs described above.

The twenty verbs were culled from lists used in the literature (Au 1986; Brown & Fish 1983; Hoffman & Tchir 1990).

Table 3 shows that virtually all action verbs are consensually seen as depicting intentional and observable events and are also consensually interpreted as depicting the first person's action. A few verbs show exceptions. *Betray* and *flatter* could be reclassified as S-E verbs because their intentionality and observability are lower and they are seen as depicting either the first person's (mere) behavior or the second person's experience. In addition, *support* is perceived by some as an attitude verb (the first person's unobservable stance of supporting another) and by some as a mere behavior verb (the first person's unintentional acts of support).

The "causality implications" (answers to why-questions) show the puzzling difference between A-P verbs (except *help*), eliciting subject attributions, and A-E verbs (except *support*), eliciting object attributions. How might we account for this difference? Logically, there are two possibilities. First, the agent-evocator verbs may not be true action verbs. Second, the object attributions may not refer to the depicted event's causal structure. The first possibility can be safely ruled out: Looking at Table 3, there is little doubt that people consider the relevant verbs as depicting actions performed by the first person (which are also clearly intentional and observable). The second possibility is more plausible: "object attributions" of action verbs may not be judgments about the unfolding causal transaction but rather *explanations* of this transaction.

According to the folk concept of intentionality (Malle & Knobe 1997a), people see intentional actions as directly caused by the agent's intention, which in turn is based on the agent's reasons. It follows that if people see a behavior as directly caused by something outside the agent they would not consider it intentional, for they take intentional behaviors to be agent-caused (see Kruglanski 1975; Locke & Pennington 1982; Miller, Smith, & Uleman 1981). Conversely, when participants provide object attributions for intentional actions, they express something other than a causality judgment, and what they express is an explanation.

People can explain intentional actions in several ways, but they predominantly offer the *reasons* for which the agent acted – i.e., subjective mental states in light of which the agent formed an intention to act (Malle 1999). In such reason explanations, explainers cite relevant desires or beliefs that the agent considered when forming an intention to act. These desires and beliefs have a content (i.e., *what* is desired or *what* is believed), and factors outside the agent can be represented in this reason content. For example, "Jerry decided to cancel their cable subscription because his partner watched too much TV [external belief content]." Or, "Jean chose not to buy the BMW because it was too expensive for her [external belief content]." Note that in both explanations, a linguistic marker for the agent's belief state is omitted (although a more formal version of the explanation could retain it: "... because *he felt* that his partner watched too much TV" and "... because *she*

Table 3. Event attributes, event categorizations, and causality implications of 20 action verbs

	Event attributes			Event categorization			Subject causality
	Purposeful	Observable	Beh1	Exp1	Exp2	Transaction	
Agent-patient verbs	82%	83%	85%	3%	9%	3%	63%
Laura betrayed John	58%	33%	53%	13%	23%	10%	73%
Louis disobeyed Jenni	92%	75%	70%	10%	17%	3%	80%
Michael flattered Gina	50%	75%	50%	0%	40%	10%	81%
Mick harassed Fran	92%	83%	97%	0%	3%	0%	53%
Nina harmed Gerald	75%	83%	97%	0%	0%	3%	64%
Ona helped Fred	100%	75%	100%	0%	0%	0%	25%
Rita hit Dion	92%	100%	100%	0%	0%	0%	69%
Ryan interrupted Cara	75%	100%	93%	7%	0%	0%	44%
Tim phoned Betty	100%	100%	97%	0%	3%	0%	81%
Yvonne ordered Aaron around	83%	100%	97%	3%	0%	0%	60%
Agent-evocator verbs	89%	89%	88%	10%	1%	1%	23%
Aaron congratulated Yvonne	100%	100%	93%	7%	0%	0%	13%
Betty answered Tim	75%	92%	93%	3%	0%	0%	0%
Cara corrected Ryan	92%	100%	90%	10%	0%	0%	31%
Dion criticized Rita	83%	92%	77%	20%	3%	0%	38%
Ellie hired Ray	100%	100%	93%	7%	0%	0%	25%
Gerald praised Nina	83%	100%	97%	0%	3%	0%	31%
Ian punished Maya	100%	75%	93%	7%	0%	0%	13%
Gina sued Michael	100%	100%	90%	10%	0%	0%	6%
Jenni thanked Louis	100%	100%	93%	3%	3%	0%	6%
John supported Laura	58%	33%	60%	30%	3%	7%	67%

Note: Beh1 = behaviour of first person; Exp1 = experience of first person; Exp2 = experience of second person

realized it was too expensive for her”). But omission of such a mental state marker is a linguistic fact that should not conceal the conceptual fact that the explainer cites contents of the agent’s subjective reasons.

Thus, the puzzling “object causality” judgments of agent-evocator verbs might in reality comprise reason explanations that mention non-agent content but omit the linguistic markers of reasons (such as “she thought” or “he wanted”). Consider an agent-evocator verb that led to object attributions in Au (1986): Gerald *praised* Nina. What would it mean that this episode happened “because of something about Nina”? Surely people do not mean that the act of praising consisted of some causal process going from Nina to Gerald; nor do they assume that Nina directly caused Gerald’s act of praising (shaping his words for him, as it were). Instead, people likely indicate that something Nina did *motivated* Gerald to praise her, which was his *reason* for praising her. If Gerald believes that Nina did something praiseworthy, her deed is represented in the *content* of Gerald’s belief, and this belief reason explains why he praised her. Thus, attributions to the object (“evocator”) of certain verbs (*praise, thank, recommend, answer, congratulate, criticize, reproach, sue*, but also *help*) reveal peoples’ insight that the agent’s reason for acting had something to do with the other person’s (the patient’s) prior behavior. The patient is thus represented in the content of a reason (for explanatory purposes), whereas the action was still directly caused by the agent and affected the patient.

To test this hypothesis directly in the present data set, two coders classified all explanations for action verbs into a complete scheme of folk explanations of intentional behavior (Malle 1998; Malle, Knobe, O’Laughlin, Pearce, & Nelson 2000), which separately codes whether a reason explanation was given, what the content of the reason was (something about the agent/subject or something about the patient/object), and whether a linguistic reason marker was present. For these classifications the coders reached reliabilities of 93%, 98%, and 99% ($\kappa = .83, .85, \text{ and } .98$), respectively.

Table 4 shows that interpersonal actions verbs were typically explained by reasons, and reasons typically come with object content and are left unmarked. However, the two sets of action verbs differed in all three coded explanation features. A-E verbs elicited on average more reasons⁹ (86%) than A-P verbs (61%), $t(9) = 3.1, p = .01$; the reasons of A-E verbs more often had object content (99%) than the reasons of A-P verbs (75%), $t(9) = 3.8, p < .01$; and the reasons of A-E verbs were more often unmarked (92%) than the reasons of A-P verbs (65%), $t(9) = 2.3, p < .05$. A prototypical explanation for an A-E verb was “Gina sued Michael because he tried to cheat her” – where *he tried to cheat her* is the object content of Gina’s reason (a belief), omitting a reason marker such as “she realized”. A prototypical explanation for an A-P verb was “Tim phoned Betty because he wanted to ask her something” – where *he wanted to ask her something* was Tim’s reason (a desire), with the mental state marker “he wanted” included.

Table 4. Coding of action explanations, predicted rate of object appearance, and traditionally coded object causality

	Coding of explanation features				Actual object causality Coding
	Reasons		Unmarked		
	Object content	Object causality Appearance	Object content	Object causality Appearance	
Agent-patient verbs	61%	78%	65%	31%	37%
Laura betrayed John	46%	83%	67%	26%	27%
Louis disobeyed Jenni	69%	45%	27%	9%	20%
Michael flattered Gina	64%	86%	29%	16%	19%
Mick harassed Fran	81%	77%	85%	53%	47%
Nina harmed Gerald	38%	100%	100%	38%	36%
Ona helped Fred	88%	100%	93%	82%	75%
Rita hit Dion	33%	83%	83%	23%	31%
Ryan interrupted Cara	81%	69%	77%	43%	56%
Tim phoned Betty	81%	62%	15%	8%	19%
Yvonne ordered Aaron around	24%	75%	75%	13%	40%
Agent-evocator verbs	86%	99%	92%	79%	77%
Aaron congratulated Yvonne	100%	100%	100%	100%	88%
Betty answered Tim	94%	100%	100%	94%	100%
Cara corrected Ryan	75%	100%	92%	69%	69%
Dion criticized Rita	64%	100%	100%	64%	63%
Ellie hired Ray	94%	94%	81%	72%	75%
Gerald praised Nina	93%	100%	86%	80%	69%
Ian punished Maya	88%	100%	100%	88%	88%
Gina sued Michael	88%	100%	100%	88%	94%
Jenni thanked Louis	94%	100%	100%	94%	94%
John supported Laura	71%	92%	58%	38%	33%

An action explanation will (on the linguistic surface) look like an “object-cause” if the three specified features of explanation coincide: a reason, object content, and unmarked. Therefore, if we treat the frequency percentages of the three features as probabilities and multiply them per behavior, we can construct an estimate of the rate of “object-cause appearing explanations” for each behavior. The last two columns of Table 4 demonstrate that these estimates predict the traditionally coded object attribution rates very well, with an overall correlation of $r = .90$ (.91 and .95 for A-E verbs and A-P verbs, respectively).

To conclude, the so-called agent-evocator verbs are clearly action verbs (with high intentionality and observability and a consensual event categorization as depicting the first person’s action). Overall, A-E verbs are explained similarly to A-P verbs, but they do elicit a greater number of reasons, these reasons are almost always representing something about the other person (i.e., something that motivated the act of congratulating, answering, correcting, etc.), and the reason is typically left unmarked. As a result, the reason content (mentioning the other person) dominates the linguistic surface of A-E verb explanations. Simple surface codings (typical for past studies) and a confounding of explanations and causality judgments then generate the misleading conclusion that A-E verbs elicit object attributions. What they do elicit are *explanations* that feature the verb object on the linguistic surface, but the structure of the depicted transaction is still causer→causee, typical for all action verbs.

The interpretation of object vs. subject attributions for action verbs as contents of reasons also accounts for an interesting finding by Hoffman and Tchir (1990). These authors showed that subject or object attributions for action verbs are predicted by the existence of a dispositional adjective that is ascribed to the subject or object, respectively (e.g., to praise/praiseworthy→object, to obstruct/obstructive→subject). Green and McKoon (1995) interpreted this finding (correctly, I believe) as indicating that adjectives in the lexicon have derived because of semantic features of their corresponding verbs, not that semantic features of verbs have derived because of their corresponding adjectives (as Hoffman & Tchir 1990 argue). One feature of verbs that may have guided this emergence of subject- vs. object-ascribed dispositional adjectives is the content of explanations typically associated with those verbs. For example, after having explained others’ praising many times by reference to the recipient’s deeds, speakers may have found it useful to describe those deeds directly as “praiseworthy” (i.e., the deeds may not have been praised yet, but they would provide a good reason for such praising). Similar developments can be imagined for reproach/reproachable, hire/hirable, correct/correctable, etc.

Hoffman and Tchir might insist that the availability of dispositional adjectives drives the use of reasons, not the other way around. This is certainly a question for empirical exploration, but suggestive cases come to mind that favor the primacy

of reason content: For the verbs *calm down* and *sue*, no object-ascribed adjectives are available, yet both show clear object reasons (see Table 4 and Au 1986). What is more, for the verbs *congratulate* and *thank*, subject-ascribed adjectives are available (congratulatory and thankful – although *thankworthy* exists too), yet both show clear object reasons (see Table 4 and Au 1986).

6. Discussion

I have tried to show how a folk-conceptual approach to interpersonal verbs can bring order to the system of classifying these verbs and the rules that govern their causal implications. Rather than classifying verbs by linguistic properties (e.g., Frawley 1992) or by their patterns of explanations (Au 1986; Brown & Fish 1986), I have proposed to classify them by using two concepts from people's folk theory of mind and behavior – intentionality and observability. These concepts form a simple 2×2 table of behavioral events that people discriminate in their perceptions and explanations of human behavior (Malle & Knobe 1997b; Malle & Pearce 2001). By defining interpersonal verbs strictly as depicting a causal transaction between two people (a causer and a causee), we can make predictions about which interpersonal verbs denote causing events (performed by the causer) and resulting events (experienced by the causee). These verb classes comprise *action verbs* and *mere behavior verbs* (denoting causing events) as well as *experience verbs* (denoting resulting events). Even though there are verbs that depict the fourth event category, intentional thoughts, these verbs are not interpersonal in nature.

This theoretically derived classification of interpersonal verbs has several advantages. First, it helps pinpoint verbs that are not transactional in nature (e.g., attitude verbs such as *like*, *loathe*, or *admire*; cognitive verbs such as *remember*, *obsesses over*, or *think about*). Second, it helps clean up traditional lists of experience verbs by distinguishing genuine experience verbs (e.g., *hear*, *see*, *notice*) from action verbs (*deceive*, *uplift*), mere behavior verbs (e.g., *frighten*, *amuse*), and “transactional verbs” that can refer either to the causer's doing or to the causee's experiencing or both (e.g., *bore*, *disappoint*, *inspire*, *surprise*, *irritate*). Third, the classification system lays bare the straightforward causal transactions that are described by these verbs – always going from causer to causee, with “subject causality” for action verbs, mere behavior verbs, and transactional verbs, and “object” causality for genuine experience verbs (which follow the perceiver–object schema).

By contrast, the complex pattern of “implicit verb causality” documented in the literature (see Rudolph & Försterling 1997) went beyond these obvious causal transaction patterns. Instead, researchers assessed people's *explanations* of interpersonal verbs. At times, explanations of interpersonal verb statements merely

reflect the causal structure of the transaction depicted by the verb; often, however, explainers attempt to render the described interpersonal event intelligible and meaningful and hence draw on the larger background that clarifies why the event occurred (which may include facts both about the causee and the causer). When people explain intentional behavior, moreover, they rely on the rich mode of reason explanations, whose unique conceptual and linguistic features must be taken into account when discussing the “causal implications” of action verbs.

A case in point is the alleged difference between agent-patient and agent-evocator verbs. As the results of the reported studies show, both verb classes denote genuine actions performed by the agent in the verb subject position. The transactional structure inherent in both action verb classes is the same, depicting an intentional, observable event performed by the agent and affecting the patient. However, when considering *why* the agent performed this action, various explanations are possible (Malle 1999, 2000). The vast majority of interpersonal actions are explained by the agent’s reasons (the mental states she had on her mind when deciding to act). Reasons are linguistically represented by either marked or unmarked contents of mental state references, but some verbs (many of them subsumed under the “agent-evocator” label) elicit even more reasons, especially those with situation content left unmarked. There is no grammatical or even conceptual difference between these different action verbs; the only difference lies in the fact that some actions vis-à-vis other people are more directly motivated by the other’s prior behavior. Such prior behavior is part of the explanatory (and causal) background to the agent’s depicted action, but this background should not be mistaken for the causal structure of action verbs.

The present account does not solve the various grammatical puzzles that interpersonal and other psychological verbs seem to pose (e.g., Moreno-Cabrera 2000; Iwata 1995; Pesetsky 1987; Postal 1971; Shibatani & Pardeshi 2001); but it provides a framework for how to approach some of these problems. For example, complex situations of interpersonal causality (sometimes labeled “indirect” causality) can be analyzed using the concepts outlined earlier. When “Linda had John pick up her laundry,” then Linda performed an unspecified intentional action (causing event) that resulted in John being motivated (resulting event) to pick up Linda’s laundry (second action). The resulting event that John underwent as causee mediated between the two actions: Linda’s initial action gave John *a reason* to pick up her laundry. Thus, John is both the causee of Linda’s initial action and the agent of the second action.

To conclude, solutions to linguistic puzzles have to be in harmony with people’s folk theory of mind and behavior – in particular, the distinctions between behavioral events and the complex framework of explanations for intentional action. A speaker’s use of interpersonal verbs (or any other linguistic category) reflects the speaker’s folk theory for the described domain and activates the addressee’s folk

theory. To the extent that these folk theories are shared, addressees can interpret speakers' expressions and react to them. Any credible analysis of verbs or other linguistic categories must therefore take into account people's shared folk theories.

Notes

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1. I use the term *behavioral event* to refer to all events that can be attributed to a person. The label *behavioral* is understood broadly as referring to events both inside and outside the skin. The term *event* is understood narrowly as things that occur at a certain point in time, thus excluding traits (i.e., enduring attributes such as being temperamental, outgoing, or open-minded).

2. This estimate is based on data points for the observer (rather than actor) perspective, compiled across three studies.

3. See Kemmer and Verhagen (1994) and Moreno-Cabrera (2000) for a similar, but perhaps more general use of the *causer* and *causee* concepts.

4. Note that *unintentional* does not mean *uncontrollable*. Some unintentional events can be managed or controlled, at least in a preventive fashion (e.g., a person may be fearful in her uncle's presence and therefore not seek out his company).

5. Looking more broadly, we may find mere behavior verbs that capture resulting events of this rare kind: "When the acupuncturist touched the liver spot, she *screamed* in agony." But note that even screaming (just as crying, weeping, and other emotion expression terms) retain an air of "doing," perhaps because they are observable or because they can be in principle intentionally performed.

6. Even though normally *P sees/hears X* implies the speaker's belief in X's existence and causal influence, at least some perceptual verbs have a non-causal reading, as in *hearing voices* or *seeing ghosts*. In these uses, the verb object is the representational object (but not cause) of the perceptual state (for the distinction between object and cause, see Pesetsky 1987).

7. There may still be a linguistic puzzle over why these verbs reverse the familiar perceiver-object scheme and place the perceiver in the dative case (Moreno-Cabrera 2000; Shibatani & Pardeshi 2001).

8. In selecting these verbs from the literature I was more inclusive than in my above critique, treating verbs such as *dread*, *trust*, *envy*, and *appreciate* as experience verbs even though they are not strictly *interpersonal* experience verbs.

9. The alternative explanation mode that people choose for 14–39% of cases are causal history of reason explanations. These explanations refer to factors that preceded and gave rise to the agent's reasons but are not themselves reasons. For a detailed account of the discrim-

ination between reason explanations and causal history or reason explanations see Malle (1999, 2001), Malle et al. (2000).

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The causative continuum*

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1. Introduction

This paper has a five-fold goal of (1) clarifying the direct/indirect distinction in causation in relation to verbal semantics, (2) demonstrating the importance of verbal semantics in causative derivation, (3) providing more compelling evidence for a continuum along both formal and semantic dimensions in causative formation, (4) arguing for the productivity parameter as a predictor of the form-function correlation, and (5) establishing the importance of an intermediate category of ‘sociative causation’. The oft-invoked notions of direct and indirect causation as well as similar ones of manipulative/directive and contact/distant refer to a fundamental distinction in the cognition of causation. These terms have been rather vaguely and loosely used, however, and need to be either redefined or clarified in relation to the verbal semantics relevant to other issues in the grammar of causation. The verbal semantics of both root verbs and causative verbs interact in a way that calls for a finer-grained semantics going well beyond the traditional transitive/intransitive distinction as well as the more recently recognized unaccusative/unergative distinction.

In a typological study it is customary to classify causative forms into (a) the lexical (synthetic), (b) the morphological, and (c) the syntactic (analytic or periphrastic) type. We find a formal typology of this kind to be limited in a number of respects. For one thing, as noted by Givón (1980) and Comrie (1981, 1985), these three types form a continuum, and each type, furthermore, consists of a continuum of its own, rendering the entire formal dimension into a single continuum. More significantly, functional-typology demands articulation of the formal and the semantic dimension of a given cognitive domain, so that the relevant form-meaning correlation is captured in a systematic manner. As it turns out, there is a great deal of functional overlap among formally distinct types of causative, which

is not predicted by a purely formal typology. We present a functional-typological analysis of causative constructions in the form of a semantic map that shows how formally distinct types of causative are distributed along the directness dimension of the causative semantics. The map also represents the pattern of grammaticalization, thereby providing a framework in which synchronic distribution and diachronic developments of various causative constructions can be directly related.

2. Verbal semantics and causativization

2.1 Active and inactive intransitives and the (re-)definition of direct/indirect causation

Recognition of two types of intransitive verb – whether they express states/processes or activities – has become customary since Perlmutter’s (1978) study of impersonal passives. Perlmutter cites previous studies by Sapir (1917) and Boas and Deloria (1939) that allude to the distinction between the two types of intransitive verb. In the wider context of voice phenomena, however, perhaps one of the earliest treatises dealing with this distinction is the 1828 work *Kotoba no Kayo-iji* (*A Passage to Language*) by Japanese grammarian Motoori Haruniwa (1763–1828). In this short monograph Haruniwa distinguished two types of intransitive verb, labeling them as *onozukara sikaru* (“to happen thus spontaneously”) and *mizukara sikasuru* (“to do so volitionally”). The distinction roughly corresponds to Perlmutter’s unaccusative/unergative contrast, but we shall opt for more semantically transparent terms and designate *onozukara sikaru*/unaccusative verbs and *mizukara sikasuru*/unergative verbs as inactive and active respectively.

Haruniwa’s classification of intransitive verbs is semantically based, as the class labels suggest. Of the utmost relevance to our study, however, is his demonstration that the two classes of intransitive verbs in Japanese correlate differently with verbal derivations. Inactive verbs tend to have a corresponding transitive (lexical causative) verb but lack a true causative and passive form. Active intransitive verbs, on the other hand, have a transitive counterpart only sporadically. Like transitive verbs, they derive both causative and passive forms regularly. The situation is summarized in Table 1.

Table 1. Derivational patterns of transitive and two types of intransitive verbs

	Transitives	Causatives	Passives
Inactive intransitives	YES	NO	NO
Active intransitives	NO	YES	YES
Transitives		YES	YES

Restricting our attention to the causativization of intransitive verbs for the moment, the following illustrates the relevant pattern, where the morpheme *-(sa)se* in (1c) and (2c) is the Japanese productive causative suffix:

- (1) a. Kabin-ga ware-ta. (Inactive intransitive)
 vase-NOM break-PAST
 ‘The vase broke.’
 b. Taroo-ga kabin-o wat-ta. (Transitive)
 NOM vase-ACC break-PAST
 ‘Taro broke the vase.’
 c. *Taroo-ga kabin-o ware-sase-ta. (Intransitive-based causative)
 NOM vase-ACC break-CAUS-PAST
 ‘Taro made the vase break.’
- (2) a. Ziroo-ga hasit-ta. (Active intransitive)
 NOM run-PAST
 ‘Jiro ran.’
 b. (No corresponding transitive verb)
 c. Taroo-ga Ziroo-ni/o
 NOM DAT/ACC
 hasira-se-ta. (Intransitive-based causative)
 run-CAUS-PAST
 ‘Taro had/made Jiro run.’
- (3) a. Ziroo-ga kabin-o wat-ta. (Transitive)
 NOM vase-ACC break-PAST
 ‘Jiro broke the vase.’
 b. Taroo-ga Ziroo-ni kabin-o
 NOM DAT vase-ACC
 wara-se-ta. (Transitive-based causative)
 break-CAUS-PAST
 ‘Taro made Jiro break the vase.’

Many transitive verbs (e.g., English *break*, *kill*) express causative meanings in the sense that the agent’s action brings about a particular process leading to a change of state in the referent of an object nominal. Traditionally such transitive verbs were not considered causatives. Causative forms (or constructions) usually meant those forms and constructions that were associated with a specific morpheme or construction type that had a certain degree of productivity. The situation was the same in Haruniwa’s grammar, where transitive verbs were characterized as expressing the meaning of *mono o sikasuru* ‘to do so and so to a thing,’ and causative forms were described as *ta o sikasuru* ‘to make others do so and so’.

Languages that divide transitives and causative forms according to a pattern similar to Japanese are not hard to find. Svan, a Kartvelian language spoken in northwest Georgia, divides verbs into four classes: Class 1, transitives; Class 2, active intransitives; Class 3, inactive intransitives; Class 4, a non-productive class consisting of affective verbs whose “subjects” occur in the dative case. Sumbatova (1993: 258) makes the following observation:

The morphological causatives are productively derived from all verbs of Classes 1, 2, and 4 and are marked by a causative suffix or a combination of two causative suffixes ... As to Class 3, its members rarely have morphological causatives of this type, though many of them have transitive counterparts belonging to Class 1, cf. *idgäri* ‘dies’ (Class 3) – *adgäri* ‘kills’ (Class 1).

Although many languages make this distinction between transitive verbs (with a causative meaning) and causative forms, a neat distinction between the two is not always maintained. In some languages the same morpheme is used in forming what corresponds to a transitive verb as well as that which corresponds to causative forms in other languages – e.g., in Quechua *wañu-či-* ‘to kill’ and *apa-či-* ‘to make someone carry something’. Even in those languages that make a clear distinction between two types of causative, the productive type may be recruited to fill gaps in the lexical domain.

These possibilities notwithstanding, a large number of languages, if not all languages, do grammaticalize a meaning distinction expressed by lexical causatives and productive causative forms, which is reflected formally (unanalyzable, unitary lexical units vs. morphologically complex constructions) in keeping with the traditional distinction between transitive verbs and causatives. Perhaps the most widely recognized way of capturing the relevant meaning contrast is in terms of the distinction between ‘direct’ and ‘indirect’ causation – lexical causatives express the former, and productive causative formation is associated with the latter. Similar terms proposed include ‘contact’ and ‘distant’ causation (Nedjalkov and Sil’nickij 1969; Masica 1976; Saksena 1982). Unfortunately, these terms have been used rather loosely, sometimes without a rigorous definition and sometimes in slightly different senses depending on the authors and the context.¹ Shibatani (1973/1975) avoided them altogether and instead opted for characterizing the distinction by the prototypical causing acts involved, using the terms ‘manipulative’ and ‘directive’. Lexical causatives express situations involving physical manipulation of an object or person (the causee) by the causer, whereas productive causatives typically involve the causer’s giving an oral direction/instruction to the causee. In some languages words representing these notions are actually grammaticalized in causative constructions; e.g., direct causatives in Yimas involve prefixes *tar-/tal-*, whose etymological meaning is ‘to hold,’ whereas indirect causatives make use of the prefix *tmi-* ‘to say’ (Foley 1991), but this seems to be based on prototypical instances

rather than reflecting the fundamental distinction involved. Our present suggestion is to define direct and indirect causation in such a way as to derive the manipulative/directive interpretations as prototypical manifestations of the two basic causative situations that lexical and productive forms encode.

Haruniwa's observation (see Table 1) suggests that lexical causative (i.e., transitive) verbs are associated with inactive intransitives, whereas productive causatives are associated with active intransitives and transitive verbs. This correlation gives us a first clue to the problem. Lexical causatives represent a situation where the causee is conceptualized as a patient, and productive causatives express a situation where the causee is also an agent, one who acts as a volitional entity in carrying out the caused event. Physical **manipulation** of the causee is normal where the causee does not act as a volitional entity, whereas oral direction-giving suffices in cases where the causee is a volitional entity capable of executing a required activity. Causation here is **indirect** in the sense that the causer does not get physically involved in the execution of the caused event. Our intuitive understandings of the two types of causation in the popular terminology are thus based on the two prototypical causative situations, one involving a patient causee and the other an agentive causee.

Therefore it is a good **first** approximation to define direct causation as a situation involving an agentive causer and a patientive causee and indirect causation as one involving two agentive participants, one an agentive causer and the other an agentive causee. When the causee is patientive, the execution of the caused event is wholly dependent on the causer's action. In most cases this dependence entails a spatiotemporal overlap of the causer's activity and the caused event, to the extent that the two relevant events are not clearly distinguishable. This spatiotemporal overlap of the causing and the caused event motivates conceptualization of the entire direct causative situation as a single event. On the other hand, when the causee is an agent with its own volition, a degree of autonomy is accorded to the caused event. Although the causer is the ultimate source of the caused event, both the causing and the caused event enjoy some degree of autonomy. Moreover, because the caused event has its own agent, it may have its own spatial and temporal profiles distinct from those of the causing event. This separability of the caused event from the causing event, captured by the term 'distant causation,' resists integration of the two, disallowing the construal of the whole causative situation as a single event. The distinctions between direct and indirect causation being discussed here can be made more explicit by means of event structure representations of the kind shown in the next page.

In these diagrams A stands for an agent and P a patient. An arrow represents an event segment, which is a potential unit for an event encodable by a verb. Representation $A \rightarrow P \rightarrow$, as in Fig. 1, indicates a transitive action chain, such that A's action carries over to the event segment involving P. This is in fact what happens when

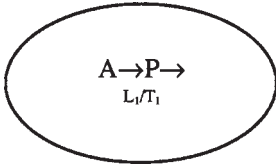


Figure 1. Direct causation

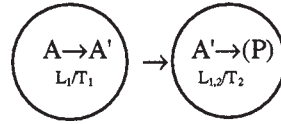


Figure 2. Indirect causation

A engages himself in direct causation. For example, if A kills P, A's causing action, ($A \rightarrow P$), carries over to P's dying event ($P \rightarrow$). Due to this transitivity of A's action, there is a spatiotemporal overlap in direct causation between the causing-event segment and the caused-event segment. In indirect causation, both temporal and spatial profiles of the causing-event and the caused-event segment may be distinct. At least the temporal profiles must be distinct for a situation to be conceptualized as indirect, but the spatial profile can be the same for the causing and the caused event-segments.

The ultimate defining feature of direct and indirect causation is the spatiotemporal configuration of the entire causative event, rather than the nature of the causee. The notion of direct causation emanates from conceptualization of a causative situation as involving the same spatiotemporal profile for the causing-event segment and the caused-event segment, as in Fig. 1. Indirect causation, on the other hand, refers to conceptualization of a causative situation as involving two relevant sub-events that have two distinct temporal profiles and two potentially distinct spatial profiles, as in Fig. 2. These two conceptualization patterns obtain most typically when the nature of the causee is correlated as in these figures. But the typical connection between direct causation and a patientive causee and between indirect causation and an agentive causee – hence the general correlation of verb types and causative types (see Table 1) – is basically due to our perception of the world. A patientive object undergoes only a limited kind of change on its own. Many other kinds of change are brought about by the external force directly acting on it. An agentive causee, on the other hand, can bring about an event apart from the causer's direct intervention in the execution of the caused event. It is, however, possible to represent a causative situation as indirect when the caused event with a patientive causee is deemed to have a spatiotemporal profile distinct from that of the causing event. English sentence *John caused the metal to melt* possibly expresses such an indirect causative situation, contrasting it with a direct causative expression such as *John melted the metal*.²

As alluded to earlier, the notion of single-event causation vs. two-event causation is based on the configuration of the spatiotemporal profiles of the two relevant event segments. Where there is a single spatiotemporal profile for the causing-event and the caused-event segment, as in Fig. 1, the whole causative situation tends to be

construed as a single event, whereas a situation involving distinct spatiotemporal profiles for the two relevant event segments, as in Fig. 2, is likely to be conceptualized as consisting of two distinct events. The tendency for transitive verbs to be unanalyzable lexical units represents this conceptualization of direct causation as a unitary event. Haiman (1985) interprets this and the tendency for indirect causation to be expressed as a complex form in terms of the iconic principle. That is, there is an iconic connection between conceptual structure and linguistic form in such a way that formal distance correlates with conceptual distance. We shall, however, show subsequently that the formal characteristic is not an entirely reliable measure for a cross-linguistic investigation of the form-function correlation; a more reliable predictor is the degree of productivity of the form (see Section 5).

As pointed out by Shibatani (1973), there are situations where lexical causatives and productive morphological or syntactic causatives do not align with the direct/indirect opposition discussed above. In some situations, lexical causatives express an indirect causative situation involving two agents (the causer and the causee), and in others productive forms are used to express a direct causative situation involving a patient causee. Most of these irregular form-meaning correspondences, however, can be accounted for in terms of lexical gaps and pragmatic conditioning on the use of lexical causatives (see Shibatani 1973). In Section 4 below, we shall examine a new situation where cross-linguistic variation in the form-meaning correspondence is observed.

2.2 Marathi causatives

Though the transitive/intransitive as well as the active/inactive distinction in intransitive verbs is important, neither is sufficient to account for the range of causative expressions. In order to see this, let us examine causative forms in Marathi (a New Indo-Aryan language), which has a richer system of causative expressions than Japanese. From a morphological point of view, we can distinguish two types of causative in Marathi, namely synthetic (or morphological) and analytic (or syntactic). Synthetic causatives can be further divided into the following types:³

- (4) a. Labiles
ughaD-Ne ‘to open’ (intr.): *ughaD-Ne* ‘to open’ (tr.)
moD-Ne ‘to break’ (intr.): *moD-Ne* ‘to break’ (tr.)
- b. Suppletives
khaa-Ne ‘to eat’: *bharaw-Ne/khaa-u ghaal-Ne* ‘to feed’
ye-Ne ‘to come’: *aaNa-Ne* ‘to bring’
- c. Internal consonant change
phaaT-Ne ‘to tear’ (intr.): *phaaD-Ne* ‘to tear’ (tr.)

- d. Internal vowel change
mar-Ne ‘to die’: *maar-Ne* ‘to kill’
dzaL-Ne ‘to burn’ (intr.): *dzaaL-Ne* ‘to burn’ (tr.)
- e. Internal vowel and consonant change
tuT-Ne ‘to break’ (intr.): *toD-Ne* ‘to break’ (tr.)
suT-Ne ‘to get untied/solved’: *soD-Ne* ‘to untie/solve’
- f. Suffixation
waaL-Ne ‘to become dry’: *waaL-aw-Ne* ‘to dry’
bas-Ne ‘to sit’: *bas-aw-Ne* ‘to seat’

Among these, the suffix type is the predominant. All these forms qualify as lexical causatives, however, because they are not predictable on the basis of intransitive verbs; they must be learned individually and must be listed in the lexicon. The *-aw* suffix has a moderately high degree of productivity, as those intransitive verbs that do not have the corresponding causative forms in (a)–(e) above take this suffix. On the other hand, it is not fully productive, as it cannot be attached to those intransitives having causatives of the (a)–(e) pattern; **ughaD-aw-Ne* ‘to open’, **khaa-aw-Ne* ‘to feed’, **mar-aw-Ne* ‘to kill’, etc. are not possible. Neither does it freely occur with regular transitive verbs (see below).

Analytic causatives involve the following ‘auxiliary’ verbs:

- (5) a. *laaw-Ne* ‘(lit.) apply, attach’ Used for coercive indirect causation, e.g.:
 raam-ne shaam-laa patra lih-aaylaa laaw-l-a
 Ram-ERG Sham-DAT letter.N write-PTCP make-PERF-N
 ‘Ram made Sham write a letter.’
- b. *bhaag paaD-Ne* ‘(lit.) make fall in one’s destiny’ Used for coercive causation, e.g.:
 raam-ne shaam-laa bas-aaylaa bhaag paaD-l-a
 Ram-ERG Sham-DAT sit-PTCP make-PERF-N
 ‘Ram left Sham with no choice but to sit.’
- c. *de-Ne* ‘(lit.) give’ Used for permissive causation, e.g.:
 mi raam-laa bas-u di-l-a
 I ram-DAT sit-PTCP give-PERF-N
 ‘I let Ram sit.’
- d. *ghe-Ne* ‘(lit.) take’ Used for benefactive causation, e.g.:
 mi raam-kaDun kholi saaph kar-un ghet-l-i
 I Ram-by room.F clean do-CONJ take-PERF-F
 ‘I had the room cleaned by Ram.’

First, the distinction between synthetic causatives and the analytic *laaw-Ne* ‘make (<apply, attach>’) causative are similar to the one between Japanese lexical and productive morphological causatives. The former are generally paired with inactive

intransitive verbs (but see below), the latter with active intransitive and transitive verbs. Thus all the synthetic causatives of the form (4a)–(4e) are paired with inactive intransitive verbs, and the situations expressed by them involve direct causation. The majority of the *-aw* suffix forms (4f) are also paired with inactive intransitive verbs. In contrast to these synthetic causatives, periphrastic *laaw-Ne* ‘make’ causatives cannot be based on inactive intransitives; e.g.,

- (6) a. kapDe waaL-l-e
clothes.N dry-PERF-N
‘The clothes dried.’
- b. raam-ne kapDe waal-aw-l-e
Ram-ERG clothes.N dry-CAUS-PERF-N
‘Ram dried the clothes.’
- c. *raam-ne kapDyaan-naa waaL-aaylaa laaw-l-a
Ram-ERG clothes-ACC dry-PTCP make-PERF-N
‘Ram made the clothes dry.’
- (7) a. shaam buD-l-aa
Sham drown-PERF-M
‘Sham drowned.’
- b. raam-ne shaam-laa buD-aw-l-a
Ram-ERG Sham-DAT drown-CAUS-PERF-N
‘Ram drowned Sham.’
- c. *raam-ne shaam-laa buD-aaylaa laaw-l-a
Ram-ERG Sham-DAT drown-PTCP make-PERF-N
‘Ram made Sham drown.’

In contrast to the *laaw-Ne* ‘make’ causative, permissive causatives with *de-Ne* ‘give’ can be based on both active and inactive intransitives as well as regular transitives; e.g.,

- (8) a. mi kapDe waaL-u di-l-e
I clothes.N dry-PTCP give-PERF-N
‘I let the clothes dry.’
- b. mi shaam-laa buD-u di-l-a
I Sham-DAT drown-PTCP give-PERF-N
‘I let Sham drown.’
- c. mi shaam-laa paL-u di-l-a
I Sham-DAT run-PTCP give-PERF-N
‘I let Sham run.’
- d. mi shaam-laa patra lih-u di-l-a
I Sham-DAT letter.N write-PTCP give-PERF-N
‘I let Sham write a letter.’

Benefactive causatives with *ghe-Ne* ‘take’, on the other hand, express a situation where the causer gets something done with a tangible beneficial effect. Consequently, they typically require an object or an effect transferable (either literally or metaphorically) to the causer. Intransitive verbs in general cannot form benefactive causatives, because they do not involve an object. Even transitive verbs may not form benefactive causatives when the object is not construable as something transferred to the causer. Observe the following (see also (9b) below):

- (9) a. mi raam-kaDun patra lih-un ghet-l-a
 I Ram-by letter.N write-CONJ take-PERF-N
 ‘I had the letter written by Ram.’
- b. mi raam-kaDun kholi saaph kar-un ghet-l-i
 I Ram-by room.F clean do-CONJ take-PERF-F
 ‘I had the room cleaned by Ram.’
- c. mi raam-kaDun kombDi maar-un ghet-l-i
 I Ram-by chicken.F kill-CONJ take-PERF-F
 ‘I had the chicken killed by Ram.’
- d. *[?]mi raam-kaDun zuraL maar-un ghet-l-a
 I Ram-by cockroach.N kill-CONJ take-PERF-N
 ‘I had the cockroach killed by Ram.’
- e. *mi raam-kaDun bas-un ghet-l-a
 I Ram-by sit-CONJ take-PERF-N
 ‘I benefited from Ram’s sitting.’
- f. *mi raam-kaDun buD-un ghet-l-a
 I Ram-by drown-CONJ take-PERF-N
 ‘I benefited from Ram’s drowning.’

(9c) and (9d) represent a minimal pair of contrasting examples. (9c) portrays a conventional situation in which the causer gets a chicken for cooking. It is hard to imagine a situation where someone gets a cockroach killed in order to obtain a dead body as in (9d).

South Asian linguistic studies note a group of verbs called ‘ingestives,’ which have in common a semantic feature of taking something into the body or mind literally or figuratively (Masica 1976). This class, which is claimed to have unique grammatical properties, consists of verbs like EAT, DRINK, LEARN, SMELL, LICK, etc. Indeed, these verbs behave differently from others in allowing both synthetic and analytic causatives:

- (10) a. tyaa-ne bhaat khaa-ll-aa
 he-ERG rice.M eat-PERF-M
 ‘He ate rice.’

- b. raam-ne tyaa-laa bhaat bharaw-l-aa
 Ram-ERG he-DAT rice.M feed-PERF-M
 ‘Ram fed him rice.’
- c. raam-ne tyaa-laa bhaat khaa-ylaa laaw-l-aa
 Ram-ERG he-DAT rice.M eat-PTCP make-PERF-M
 ‘Ram made him eat rice.’

These verbs naturally permit a permissive causative, but do not allow a benefactive causative for the reason given above – the object referred to does not come into the causer’s possession; e.g.,

- (11) a. raam-ne tyaa-laa bhaat khaa-u di-l-aa
 Ram-ERG he-DAT rice.M eat-PTCP give-PERF-M
 ‘Ram let him eat rice.’
- b. *raam-ne tyaacyaa-kaDun bhaat khaa-un ghet-l-aa
 Ram-ERG he-by rice.M eat-CONJ take-PERF-M
 ‘Ram benefited through his eating rice.’

Ingestive verbs behave both like inactive intransitives in having corresponding synthetic causatives and like active intransitives/transitives in permitting analytic *laaw-Ne* ‘make’ causatives. This pattern indicates that they have a dual property of assigning both an agent and a patient role to the subject of the base verb. Taking something into one’s body or mind implies both doing something and being affected at the same time. Profiling the patient role of the subject of these verbs permits their alignment with inactive intransitives, whereas focusing on the agent role aligns them with active intransitives and transitives (see the Introduction to this volume and Amberber (2000) on the causativization of the verbs of eating and drinking in Amharic).

The dual role of ingestive subjects reminds us of those reflexive or middle verbs whose subject nominals also play a dual role. Middle verbs cut across transitive/intransitive classes. Intransitive verbs like SIT and STAND UP as well as ASCEND and COME DOWN are often treated as middle verbs, similar in nature to transitive reflexives DRESS ONESELF, SHAVE ONESELF, COMB ONE’S HAIR, BRAID ONE’S HAIR, etc. (see Kemmer 1988). Indeed, these middle verbs align with so-called ingestive verbs with respect to the pattern of causativization, suggesting that the latter should be treated as middles, rather than as a distinct group of verbs – contra the Indo-Aryan linguistic tradition; e.g.,

- (12) a. tyaa-ne kapDe ghaat-l-e
 he-ERG clothes.N wear-PERF-N
 ‘He wore the clothes.’

- b. raam-ne tyaa-laa kapDe ghaat-l-e
 Ram-ERG he-DAT clothes.N dress-PERF-N
 ‘Ram dressed him.’
- c. raam-ne tyaa-laa kapDe ghaal-aaylaa laaw-l-e
 Ram-ERG he-DAT clothes.N wear-PTCP make-PERF-N
 ‘Ram made him wear the clothes.’
- (13) a. raam bas-l-aa
 Ram sit-PERF-M
 ‘Ram sat.’
- b. mi raam-laa bas-aw-l-a
 I Ram-DAT sit-CAUS-PERF-N
 ‘I sat/seated Ram.’
- c. mi raam-laa kholi-t bas-aaylaa laaw-l-a
 I Ram-DAT room-in sit-PTCP make-PERF-N
 ‘I made Ram sit in the room.’

A closer analysis of base-verb semantics is important not only in accounting for the various restrictions that different causativization processes may impose, but also in understanding the various ways that different groups of verbs align. Especially important is the semantic role borne by the subject of the base verb – whether it is the agent, the patient or both. These considerations all point to the conclusion that causativization processes are organized largely according to the semantics of the base verbs (see other contributions to this volume).

3. The semantic continuum: Sociative causation

The direct/indirect opposition is fundamental in the description of causative constructions, because in most languages transitive verbs expressing direct causation exist as lexical units, and there is often an additional means to express indirect causation. This section points out that there is an intermediate category between direct and indirect causation and demonstrates that these different types form a continuous semantic space bounded by direct causation on one end and indirect causation on the other. We will also show in Section 6 that the intermediate category provides an important clue to understanding the development of a certain range of meaning associated with causative morphemes in a fairly large number of languages.

As noted earlier, the *-aw* suffix forms are dominant among Marathi synthetic causatives. The majority of these forms are based on inactive intransitive verbs as below:

- (14) *aaT-Ne* ‘to get shrunk’: *aaT-aw-Ne* ‘to shrink something’
bhidz-Ne ‘to get wet’: *bhidz-aw-Ne* ‘to wet something’
suk-Ne ‘to become dry’: *suk-aw-Ne* ‘to dry something’
buD-Ne ‘to get drowned’: *buD-aw-Ne* ‘to drown someone’
ghaabar-Ne ‘to get frightened’: *ghaabar-aw-Ne* ‘to frighten someone’
paT-Ne ‘to get convinced’: *paT-aw-Ne* ‘to convince someone’

The *-aw* suffix is in a paradigmatic relation with other synthetic causative forms, such that those intransitives having corresponding synthetic causative (transitive) verbs cannot take this suffix in forming a lexical causative. In addition to middle verbs – construable as either active or inactive – certain active intransitives permit *-aw* suffixation. For example,

- (15) *tsaal-Ne* ‘to walk’: *tsaal-aw-Ne* ‘to make someone walk’
kheL-Ne ‘to play’: *kheL-aw-Ne* ‘to make someone play’
mut-Ne ‘to urinate’: *mut-aw-Ne* ‘to make someone urinate’
naats-Ne ‘to dance’: *naats-aw-Ne* ‘to make someone dance’
paL-Ne ‘to run’: *paL-aw-Ne* ‘to make someone run’

This is a case where *-aw* forms convey a situation involving an agentive causer and an agentive causee, as with indirect causative expressions using the auxiliary verb *laaw-Ne* ‘make (<apply, attach)’. Nevertheless, typical situations expressed by these differ significantly. These *-aw* forms express a situation intermediate between direct and indirect causation. For example, *paL-aw-Ne* ‘to make someone run’ describes a situation in which the causer runs while accompanying the causee. That is, like direct causation, the *-aw* causatives in question convey a situation where the causer’s action and the causee’s action show a spatiotemporal overlap. Moreover, in many cases the causer performs the same action as the causee in executing the caused event. On the other hand, the involvement of two agents shows a resemblance to indirect causative forms. We term this intermediate category ‘sociative causation’ and the form expressing it ‘sociative’ (cf. Pardeshi 2000, who suggests the term ‘associative’, Nedyalkov and Silnitsky 1973, who have brief mentions of ‘assistive’, ‘comitative-causative’, ‘instrumental-causative’ meanings, and Dixon 2000, whose ‘involved/not involved’ distinction seems to point to this category). The meaning contrast between a sociative and an indirect causative is substantiated by the contrast between (17a) and (17b), where the former is semantically infelicitous:⁴

- (16) raam don kilomiTar paL-l-aa
 Ram two kilometer run-PERF-M
 ‘Ram ran two kilometers.’
- (17) a. shaam-ne raam-laa don kilomiTar paL-aw-l-a (Sociative)
 Sham-ERG Ram-DAT two kilometer run-CAUS-PERF-N

- *paN shaam raam-barobar paL-l-aa naahi
 but Sham Ram-with run-PERF-M not
 ‘Sham made Ram run two kilometers but he did not run with Ram.’
- b. shaam-ne raam-lA don kilomiTar
 Sham-ERG Ram-DAT two kilometer
 paL-aaylaa laaw-l-a (Indirect)
 run-PTCP make-PERF-N
 paN shaam raam-barobar paL-l-aa naahi
 but Sham Ram-with run-PERF-M not
 ‘Sham made Ram run two kilometers but he did not run with Ram.’

In addition to active intransitive verbs, certain transitive verbs also yield *-aw* constructions. For example,

- (18) a. mi raam-kaDun kholi saaph kar-aw-l-i
 I Ram-by room.F clean do-CAUS-PERF-F
 ‘I had Ram clean the room.’
- b. shaam-ne raam-kaDun patra lih-aw-l-a
 Sham-ERG Ram-by letter.N write-CAUS-PERF-N
 ‘Sham had Ram write a letter.’

These forms also express situations where two agents exist. As before, they describe a distinct situation that differs from ordinary indirect causative situations. For example, (18a) means that the speaker was in the room supervising Ram’s cleaning. In (18b), it is most likely that Sham is illiterate and makes Ram write the letter by dictating to him. That the causer in these forms must accompany the causee in the execution of the caused event is seen from the following contrast, which shows that the spatiotemporal overlap of the causer’s action and the causee’s action need not obtain in the analytic causative construction.

- (19) a. *mi ek taas baaher phiraaylaa gelo aaNi tyaa weL-aat
 I one hour out walk went and during time-in
 raam-kaDun kholi saaf kar-aw-l-i (Sociative)
 Ram-by room.F clean do-CAUS-PERF-F
 ‘I went for a walk for one hour and during that time had Ram clean the room.’
- b. mi ek taas baaher phiraaylaa gelo aaNi tyaa weL-aat
 I one hour out walk went and during time-in
 raam-laa kholi saaph kar-aaylaa laaw-l-i (Indirect)
 Ram-DAT room.F clean do-PTCP make-PERF-F
 ‘I went for a walk for one hour and during that time had Ram clean the room.’

Although sociative causatives can be derived from transitive verbs (as shown above), periphrastic expressions are preferred. Benefactive *ghe-Ne* ‘take’ causative are employed when a benefactive sense is appropriate [(20a)], or the *laaw-Ne* ‘make’ causative are used when coercion is involved [(20b)].

- (20) a. mi raam-kaDun kholi saaph kar-un ghet-l-i
 I Ram-by room.F clean do-CONJ take-PERF-F
 ‘I got the room cleaned by Ram.’
 b. shaam-ne raam-laa patra lih-aaylaa laaw-l-a
 Sham-ERG Ram-DAT letter.N write-PTCP make-PERF-N
 ‘Sham made Ram write a letter.’

There is thus a tendency to avoid sociative expressions involving transitive bases, indicating a preference for analytic causatives when two agents are involved and when the causee agent’s action is clearly separable from the causer’s.

Sociative causatives based on transitive verbs differ slightly from those given involving active intransitives. In the latter case, the causer is more actively involved in the execution of the caused event – the causer actually runs with the causee in (17a). In the case of sociatives based on transitive verbs, however, the causer does not get involved to the same extent. In (18a) the speaker does not necessarily do the cleaning with Ram, and in (18b) Sham does not actually write the letter.

The intermediate status of sociative causatives is nicely shown by Bruce (1984:155–156) for the Alambalak (Papua New Guinea) sociative causative formative *ha-*, which contrasts with both the direct causative formative *ka-* and the indirect causative serial verb construction involving *hay-* ‘give’;

- (21) a. ka-fkne-më-r-m (Direct)
 DP.CAUS-enter-R.PST-3SM-3PL
 ‘He caused them to enter (something) by physically taking them.’
 b. ha-fkne-më-r-m (Sociative)
 DE.CAUS-enter-R.PST-3SM-3PL
 ‘He caused them to enter (something) by entering with them.’
 c. yima-r hay-noh-më-r-a (Indirect)
 person-3SM give-unconscious-R.PST-3SM-1s
 ‘A man gave me (something) (causing) me (to become) unconscious.’

In what Bruce (1984) calls ‘direct physical causative’, represented by (21a) above, the causer ‘causes the effect on [the causee] by doing something involving physical contact with [the causee]’. ‘[The causee] is only a passive participant ...’ (155). In the case of what we call sociative illustrated by (21b), ‘something (x) happens to the causee (or the causee does x) because the same thing (x) happens to the causer

(or the causer does x), or because a similar thing (y) happens to the causer (or the causer does y) where y involves a feature in common to both x and y.’ ‘That which happens to the causer and causee (or that which they do) occurs at or near the same time and while the causer and causee are in physical proximity.’ (156) As for the indirect causative exemplified by (21c); ‘The causer of which the first verb root is predicated ... causes the effect ...’ ‘The effect need not overlap or occur in immediate succession with the cause and the two participants need not be at the same place when the effect takes place.’ (156)

We recognize at least the following three types of sociative construction: (i) joint-action, (ii) assistive, and (iii) supervision, as illustrated by the following Japanese examples:

- (22) a. Hahaoya-ga kodomo-o asoba-se-te i-ru. (Joint-action)
 mother-NOM child-ACC play-CAUS-CONJ be-PRES
 ‘Mother is making the child play.’
- b. Hahaoya-ga kodomo-ni osikko-o sa-se-te
 mother-NOM child-DAT pee-ACC do-CAUS-CONJ
 i-ru. (Assistive)
 be-PRES
 ‘Mother is making the child pee.’
- c. Hahaoya-ga kodomo-ni hon-o yoma-se-te
 mother-NOM child-DAT book-ACC read-CAUS-CONJ
 i-ru. (Supervision)
 be-PRES
 ‘Mother is making the child read a book.’

Two features distinguish sociatives from indirect causatives. First, when a language allows alternative marking of the causee nominal, the accusative version generally conveys sociative causation, whereas the dative or other oblique marking signals indirect causation. In Japanese, either the accusative or the dative can mark the causee of an intransitive-based causative, and the former expresses a sociative meaning as in (22a). A similar observation was made for Hungarian by Hetzron (1976). The accusative causee-marking in this language expresses a joint-action or supervision sociative meaning, whereas the instrumental causee-marking indicates indirect causation. Observe the following examples from Hetzron (1976:394):

- (23) a. Az ápolónő minden nap egy órát sétáltata
 the nurse every day one hour:ACC made:walk
 őt. (Accusative)
 he:ACC
 ‘The nurse walked him for an hour every day.’

- b. Az orvos minden nap egy órát sétáltatott
 the doctor every day one hour:ACC made:walk
 vele. (Instrumental)
 he:INSTR
 ‘The doctor had him walk for an hour every day.’ (as a prescription)

With regard to the accusative forms of the above type, Hetzron (1976:394) remarks that ‘the causer personally conducts the operation involved and supervises every step ...’

Second, the interpretation of the aspectual form differs between sociatives and indirect causatives. In the former, the progressive form is interpreted either as expressing the progressive meaning, i.e., an on-going activity, or a generic activity. In the case of indirect causatives, the progressive form conveys only the generic sense.

Both joint-action and assistive sociatives entail physical involvement of the causer in the caused event, just like direct causation. Supervision sociatives, on the other hand, are much more similar to indirect causation in that the causer and the causee may be physically separated. Indeed, supervision can be performed long-distance, such that (22c) can depict a situation where the mother is outside the room where the child is reading a book. Thus sociatives themselves form a continuum, with the joint-action type leaning toward the direct causation pole and the supervision type toward the indirect end. The continuum is easier to see when the following event-structure diagrams are compared to those representing direct and indirect causation, shown as Figs 1 and 2 in Section 2 (p. 90).

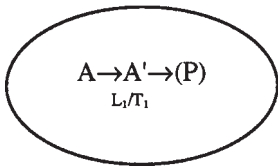


Figure 3. Joint-action/assistive

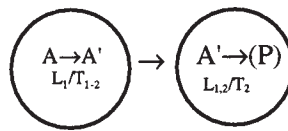


Figure 4. Supervision sociative

In both direct causation and joint-action/assistive sociative, there is a spatiotemporal overlap between the causing-event segment and the caused-event segment, thereby showing semantic affinity even though the causee roles are different. In the case of supervision sociative, there is only partial temporal overlap between the causing-event segment and the caused-event segment, and the spatial profiles of these event segments may be distinct. In indirect causation, both temporal and spatial profiles of the causing-event and the caused-event segment may be distinct.

As noted earlier, a single-event causation of the direct causative type is typically expressed by lexical causatives (or transitive verbs), a two-event causation

of the indirect type is typically expressed by productive forms, either a morphologically complex form or a periphrastic construction. What is interesting about sociative causatives is that this form-meaning correspondence does not obtain in a straightforward manner. In fact, languages differ as to which sociative type their causative forms may express. Marathi *-aw* suffix forms, for example, do not easily express a long-distance supervision sociative situation such that forms (18a)–(18b) imply that the causer was close to the place of the caused event, whereas the Japanese form (22c), as well as its English counterpart as shown in the translation, readily allows a reading of long-distance supervision. On the other hand, the Mandarin Chinese *jiào* causative, as seen below, can express only indirect causation and supervision sociative situations, and it is incapable of expressing assistive or joint-action sociative situations.

- (24) Māma jiào háizi kàn shū.
 mother make child read book
 ‘Mother made the child read a book.’

What we find here is that some causative forms (e.g., the Mandarin Chinese *jiào* causative) express the domain closer to that of indirect causation; some others (e.g., English *make* and Japanese *sase*-forms) extend the domain of coverage further toward the direct end. Marathi *-aw* and Guaraní *mbo-/mo*-causatives (Velázquez-Castillo, this volume) cover the domains closer to the direct end. But they too differ in that the former covers a domain larger than the latter. The observed pattern of distribution can be summarized as in Table 2.

In the next section we provide an overall framework that accounts for the distribution pattern observed in Table 2. The table also shows that languages use formally different constructions in expressing a similar domain of meaning. For example, in expressing sociative situations, Marathi uses the lexically restricted *-aw* form, whereas Japanese uses the productive *-sase* form, and English and Chinese use syntactic constructions. This overlapping distribution of different types of

Table 2. Distribution of different causative forms over the sociative domain

					Chinese <i>jiào</i>
				Japanese <i>-sase</i> /English <i>make</i>	
		Marathi <i>-aw</i>			
	Guaraní <i>mbo-/mo-</i>				
DIRECT	JOINT-ACTION	ASSISTIVE	SUPERVISION	INDIRECT	

causative construction indicates that they are not functionally discrete as may be suggested by the formal typology in terms of the tripartite classification of lexical, morphological, and syntactic. Indeed, we show, in the next section, that causative constructions are not even formally discrete.

4. Continuum in the formal dimension

The formal dimension of causativization also forms a continuum, from an analytic pattern through a synthetic one to the morphologically unanalyzable unit. The formal continuum represents the degree of synthesis or fusion (Sapir 1921) and reflects the degree of grammaticalization. Though convenient as a first approximation, the popular tripartite classification of causatives as syntactic, morphological, and lexical is a gross simplification; each class contains members showing different degrees of synthesis, and the boundaries between the types are also fuzzy.

When a causative meaning is expressed by an independent verbal element, we may identify the construction as syntactic, analytic, or periphrastic. What can be identified as syntactic, however, varies considerably from one language to another, as well as from one construction to another within a single language. The following causative constructions from three different languages can be identified as syntactic, for example, but they differ in the degree of synthesis or integration of the materials of the subordinate process into the main clause (Givón 1980).

(25) Korean

- a. ai-ka chaek-ul ilk-etta.
 child-NOM book-ACC read-PAST.IND
 ‘The child read the book.’
- b. emeni-ka [ai-ka chaek-ul ilk-key] hay-etta.
 mother-NOM child-NOM book-ACC read-CMPLZR do-PAST.IND
 ‘Mother made the child read the book.’
- c. emeni-ka ai-eykey/lul [chaek-ul ilk-key]
 mother-NOM child-DAT/ACC book-ACC read-CMPLZR
 hay-etta.
 do-PAST.IND
 ‘Mother made the child read the book.’

(26) German

Hans liess seinen Sohn den Brief abtippen.
 ‘Hans made his son type the letter.’

(27) French

- a. J'ai fait préparer la mayonnaise à Jean.
 'I made John prepare the mayonnaise.'
 b. J'ai laissé l'enfant manger un gâteau.
 'I let the child eat a cake.'

In all these examples, the causative 'auxiliaries' (Korean *ha-ta* 'do', German *lassen* 'make', and French *faire* 'make') inflect as verbs. But the constructions differ in the degree of integration into the main clause of the materials semantically belonging to the caused event. The Korean *ha-ta* causative shows the least degree of integration. The preferred pattern is (25c), where the causee nominal is integrated into the main clause and receives either dative or accusative marking; this option is normal for an indirect object in the language. (25b) is also possible, however, where the caused event is expressed in the structure of an independent clause, with the causee nominal marked by the nominative enclitic. The combination of the complement verb, *V-key*, and the causative auxiliary *ha-ta* 'do-IND' can also be separated by the negative particle *an* 'not' or by the topic enclitic *-nun* (see Maldonado and Nava, this volume, for a similar periphrastic causative in Tarascan).

The German *lassen* construction lies midway between the Korean causative and the French *faire* construction in that although it disallows nominative marking on the causee nominal, it retains it in the object position of the causative verb. The object status of the causee nominal (or perhaps the verbal status of *lassen*) is problematic, however, in that it cannot be made the subject of a passive clause – in contradistinction to the object of a less grammaticalized causative verb such as *zwingen* 'to force'. Observe the following contrast:⁵

- (28) a. Man zwang den Studenten abzureisen.
 'They forced the students to leave.'
 b. Der Student wurde gezwungen abzureisen.
 'The student was forced to leave.'
- (29) a. Man liess den Studenten abreisen.
 'They made/let the student leave.'
 b. *Der Student wurde abreisen gelassen. (Kulikov 2001)

It is well known that the French *faire* causative shows a high degree of complement integration into the main clause. Unlike German *lassen* or French *laisser* 'let' causative, for example, the causee of the *faire* causative cannot appear in the object position of the causative verb (cf. (27a) and (27b)). Indeed, this causative does not permit the separation of *faire* from the main verb by the insertion of a pronominal clitic, and its case distribution follows the basic pattern of a simplex sentence involving three-place verbs (e.g., *donner* 'to give' and *payer* 'to pay').

As the comparison of French *faire* and the *laisser* causative indicates, there is some variation in the degree of synthesis among syntactic causatives within a single language as well. Variation along the formal lines discussed here correlates with the degree of grammaticalization on the semantic side. Causative verbs differ in semantic content from each other. The English verbs *cause*, *persuade*, and *force* retain their literal meaning, but causative *get*, *make*, and *have* no longer convey a literal meaning, showing the semantic bleaching characteristic of grammaticalization.⁶ Just as German *lassen* ‘CAUSE < leave’ and *zwingen* ‘force’ show parallel semantic and structural characteristics of grammaticalization (see (28) and (29) above), French causatives *faire* < ‘do/make’ < *laisser* ‘leave/let’ < *forcer* ‘force’, reflect a descending degree of grammaticalization in meaning (semantic bleaching) and synthesis (structural integration) (see Achard, this volume, and Maldonado and Nava, this volume).

One interesting grammatical repercussion of the difference in the degree of grammaticalization can be seen in the Marathi benefactive and permissive causative constructions. The Marathi benefactive causative employs the verb *ghe-Ne* ‘to take’, and the permissive causative *de-Ne* ‘to give’. Used as main verbs, these naturally require an object nominal referring to a transferred object. This lexical meaning is retained in the regular (i.e., non-causative) benefactive construction using *de-Ne* ‘to give’, such that benefactive conversion is blocked when no transferable object is involved; e.g.,

- (30) a. raam-ne sitaa-laa pustak wikat ghe-un di-l-a
 Ram-ERG Sita-DAT book.N purchase take-CONJ give-PERF-N
 ‘Ram bought Sita a book.’
 b. *raam-ne sitaa-laa baadzaar-aat dzaa-un di-l-a
 Ram-ERG Sita-DAT market-in go-CONJ give-PERF-N
 ‘(lit.) Ram went Sita to the market/Ram went to the market for Sita.’

In permissive causative constructions, however, the demand for the existence of a transferable object no longer remains; e.g.,

- (31) a. raam-ne sitaa-laa pustak wikat ghe-u di-l-a
 Ram-ERG Sita-DAT book.N purchase take-PTCP give-PERF-N
 ‘Ram let Sita buy a book.’
 b. raam-ne sitaa-laa baadzaar-aat dzaa-u di-l-a
 Ram-ERG Sita-DAT market-in go-PTCP give-PERF-N
 ‘Ram let Sita go to the market.’

Compared to the *de-Ne* permissive causative, the *ghe-Ne* ‘take’ benefactive causative requires the presence of an object nominal construable as something to be transferred to the causer (see earlier discussion in Section 2.2); e.g.,

- (32) a. raam-ne sitaa-kaDun patra lih-un ghet-l-a
 Ram-ERG Sita-by letter.N write-CONJ take-PERF-N
 ‘Ram got the letter written by Sita.’
- b. *raam-ne sitaa-kaDun baadzaar-aat dzaa-un ghet-l-a
 Ram-ERG Sita-by market-in go-CONJ take-PERF-N
 ‘Ram got Sita to go to the market/Ram benefited from Sita’s going to the market.’

This observation suggests that the permissive causative is far more advanced in the grammaticalization of *de-Ne* ‘to give’ than the benefactive causative is with *ghet-Ne* ‘to take,’ which still retains the lexical properties of its source in requiring a transferable object.

The transition from periphrastic/syntactic constructions to the morphological causatives is not that easy to witness, though the French *faire* construction comes close to showing this transitional stage. Even a clearer and perhaps slightly more advanced case than the French *faire* case is the *-a(k)* causative in Shipibo-Konibo as described by Valenzuela, this volume. Etymologically this form appears related to the transitive verb *ak-* ‘to make’. In forming a causative expression, it forms a phonological word together with an adjectival root as well as other endings such as the plural marker and an aspectual suffix, as in *nenké-ak-kan-ai* (long-CAUS-PL-INCOMPETIVE) ‘(people are) lengthening (something)’. But the *-a(k)* form allows insertion of modifying morphemes between the suffix and the root. It also takes a conjoined root form as an input as in [*pené itan bená*]-*a-ke* ([shiny and new]-make-COMPLETIVE) ‘made (something) look shiny and new’. (See Valenzuela, this volume, for details as well as Queixalós, this volume, for a similar situation in Sikuani.)

The periphrastic-morphological continuum is most clearly seen in the etymological connections between causative affixes and lexical verbs. Many affixes such as Quechua *-či* and Marathi *-aw* do not have a lexical meaning, nor do they show any obvious phonological resemblance to independent lexical items. Still, in the continuum model we are developing, we expect to find such cases, and indeed we do. We already noted that the Shipibo-Konibo suffix *-a(k)* is likely to be related to the verb *ak-* ‘to make’. Nedjalkov & Silnitsky (1973) report that the Manchu causative-passive suffix *-bu* is traceable to the verb ‘give’, and that the Avar suffix *-abi* has an independent use in the form of *γabi* ‘to do’. Payne (this volume) also notes that the Asheninka causative suffix *-akag* is etymologically related to *tag/ag* ‘say, do’. In Olutec the transitive verb *yak* ‘to let, distribute, give away’ has grammaticalized to become the causative suffix *-yak* (Zavala, this volume). Finally, the Japanese causative ending *-sase* is likely to be related to the verb *su-* ‘do’. Recall that the Korean syntactic causative makes use of the verb *ha-ta* ‘to do’ (see (25)).

Just as syntactic (or analytic) causatives show differences with respect to the degree of synthesis and grammaticalization, morphological causatives also come in a great variety. With regard to synthesis, they can be divided into several groups ranging from agglutinative to pure lexical forms that are morphologically unanalyzable. Agglutinative causatives (e.g., Japanese *-sase* and Marathi *-aw*) have clearly segmentable affixes that can be identified as causative morphemes. Fusional (or inflectional) causatives involve internal vowel or consonantal changes or both, as in the Marathi pair *phuT-Ne* ‘break (intr.)’ vs. *phoD-Ne* ‘break (tr.)’ (see (4c–e)). Interesting arrays of fusional causatives have developed among Tibeto-Burman languages, where the proto-causative suffix **-s* has been incorporated into adjacent consonants, even developing a tonal contrast for causative alternation in Lushai: Cantonese *kwon* ‘wide’: *kwok* ‘widen (tr.)’; *saan* ‘dispersed’: *saat* ‘disperse (tr.)’; *gin* ‘solid, tight’: *git* ‘to tighten (tr.)’; Burmese *pyei* ‘full’: *hpyei* ‘fill’; *ce?* ‘be cooked’: *hce?* ‘cook (tr.)’; *su?* ‘damp’: *hsu?* ‘dampen (tr.)’; Tiddim Chin *púk* ‘fall’: *phúk* ‘fell’; *kia* ‘fall’: *xia* ‘drop (tr.)’; *káŋ* ‘raise oneself’: *xáŋ* ‘lift something’; Lushai *núy* ‘laugh’: *nùy* ‘laugh at’; *hér* ‘be turning’: *hè?* ‘to turn something’; *ʔáaw* ‘shout’: *ʔáaw* ‘call to’ (see Matisoff 1976).

Pure lexical causatives are those in which there is no identifiable causative marking vis-à-vis their non-causative counterparts. Most, if not all, languages have basic (causative) transitive verbs that have no identifiable causative marking, such as Japanese *waru* ‘to break (tr.)’. Some of these may have intransitive (anticausative or decausative) counterparts, such as Japanese *war-e-ru* ‘to break (intr.)’. When intransitive verbs take the same shape as transitive forms, as in English *open* (intr.): *open* (tr.); *break* (intr.): *break* (tr.), they are called ‘labile’. Suppletive causatives such as English *die*: *kill* and *eat*: *feed* are also of the pure lexical type.

Although classification on purely morphological grounds is possible, it is important to recognize that (a) the members of the morphological type may not be uniform, and (b) that the transition from the morphological type to the pure lexical type can be gradient. To illustrate the first point, let us look at Japanese transitive verbs. Japanese has a number of pure lexical causatives (e.g., labile *hiraku* ‘to open’, suppletive *korosu* ‘to kill’, and underived form *saku* ‘to split (tr.)’), as well as a large number of transitive verbs arguably of the agglutinative type; e.g.,

(33) Intransitives	Transitives (causatives)
<i>kawak-u</i> ‘dry-PRES’	<i>kawak-as-u</i> ‘dry-AS-PRES’
<i>wak-u</i> ‘boil-PRES’	<i>wak-as-u</i> ‘boil-AS-PRES’
<i>ner-u</i> ‘sleep-PRES’	<i>nek-as-su</i> ‘sleep-AS-PRES’
<i>sam-e-ru</i> ‘cool-E-PRES’	<i>sam-as-su</i> ‘cool-AS-PRES’
<i>ak-u</i> ‘open-PRES’	<i>ak-e-ru</i> ‘open-E-PRES’
<i>ag-a-ru</i> ‘ascend-A-PRES’	<i>ag-e-ru</i> ‘ascend-E-PRES’
<i>tom-ar-u</i> ‘stop-AR-PRES’	<i>tom-e-ru</i> ‘stop-E-PRES’

<i>or-i-ru</i> ‘descend-I-PRES’	<i>or-os-u</i> ‘descend-OS-PRES’
<i>ot-i-ru</i> ‘drop-I-PRES’	<i>ot-os-u</i> ‘drop-OS-PRES’

As seen above, the transitive verbs on the right have clearly segmentable morphemes that can be identified as suffixes deriving causative verbs. Morphologically speaking, they are of the same type as the agglutinative causative *-sase* forms; e.g., *mi-sase-ru* ‘see-CAUS-PRES/show’, *kaka-se-ru* ‘write-CAUS-PRES/cause to write’. But these two types of agglutination differ with respect to regularity/productivity. The *-sase* causatives are entirely regular and the morphological shapes are determined on the basis of the phonological environment; consonant-ending roots take the *-se* form with an intervening thematic vowel /a/, and vowel-ending roots take the *-sase* form. Given the verb root, one can predict the exact shape of the *-sase* causative form. This is not the case with the suffixed forms in (33). Although there is a certain degree of productivity in some transitive-intransitive patterns, the suffixes involved are lexically determined; they are not interchangeable, and given an intransitive verb root there is no way of predicting the correct transitive form. The causative verbs in (33) are in a paradigmatic relation with pure lexical causative transitives, and accordingly, traditional analyses, if they ever analyze these forms morphologically, treat the suffixes in (33) as transitivity, rather than causative, suffixes.

Difficulty in drawing a sharp boundary between pure lexical causatives and morphological causatives is seen in Turkish. This language has pure lexical causatives such as *kir-* ‘to break’, *yirt-* ‘to tear’, and *yak-* ‘to burn’, and productive morphological ones involving suffixes *-Dir* and *-t*; *öl-* ‘die’: *öl-dür* ‘kill’, *oku-* ‘read’: *oku-t* ‘make read’. These productive forms are entirely regular – the choice of the suffixes is phonologically determined; *-Dir* after consonants and *-t* after polysyllabic stems in vowels, *r*, and *l*. Thus, in these regular causative forms, the relationship between the causatives and the non-causative counterparts is transparent; the relevant suffixes are chosen according to the rule noted above, and removing the causative suffixes yields well-formed non-causative expressions. There are, however, certain forms in which this regularity is obscured. The causative forms of *ak-* ‘flow’ and *piş-* ‘cook’, for example, are *ak-it* and *piş-ir*, respectively, rather than expected **ak-tir* and **piş-tir* – the correct causative forms must be individually learned. In some other forms, stem forms change under causativization, as in *kalk-* ‘get up’: *kal-dir* ‘get up’, *gör-* ‘see’: *gös-ter* ‘show’ (see Kornfilt 1997: 331–334). These forms involve suffixes, which can be easily segmented, and they qualify as morphological causatives, but they are entirely irregular and are functionally more similar to unanalyzable lexical causatives than to productive morphological forms (see below).

The formal continuum discussed above can be summarized as in the following table illustrated by Marathi forms.

Table 3. Formal causative continuum

HIGH <-----degree of synthesis/lexicalization/grammaticalization----->LOW	
LOW <-----degree of regularity/productivity----->HIGH	
pure lexical	< fusional < agglutinative < analytic/syntactic
<i>ughaD-Ne</i> 'open'	<i>maar-Ne</i> 'kill' <i>de-Ne</i> 'give'
	< -aw < <i>ghe-Ne</i> 'take'
<i>bharaw-Ne</i> 'feed'	<i>toD-Ne</i> 'break' <i>laaw-Ne</i> 'make'

5. Form-meaning correlations

Aside from the high relevance of the representation in Table 3 to the grammaticalization studies, the utility of such representation rests on whether it makes a significant prediction about the cross-linguistic patterns of the form-function correlation, capturing which is the goal of a functional typological enterprise. On this question, Comrie (1981: 172) suggests the following:

Many languages have a formal distinction correlating with this distinction between direct and indirect causatives [read 'causation']. Moreover, the kind of formal distinction found across languages is identical: the continuum from analytic via morphological to lexical causative correlates with the continuum from less direct to more direct causation.

Dixon (2000: 74ff) speaks of the continuum of the formal aspect of causative mechanism in terms of 'compactness', and sets out the following scale:

(34) Scale of compactness (Dixon 2000: 74)

		Type of mechanism
more compact	L	Lexical (e.g. <i>walk</i> , <i>melt</i> in English)
	M	Morphological – internal or tone change, lengthening reduplication, affixation, etc.
	CP	Two verbs in one predicate ('Complex Predicate'), including serial verbs; <i>faire</i> in French; compounding ...;
		the causative particle in Kammu, ...
	P	Periphrastic constructions with two verbs (a causative verb and a lexical verb) in separate clauses
less compact		

Dixon then shows a correlation between the degree of compactness and various semantic parameters, including the directness parameter. With regard to this parameter, he notes that ‘the direct value of the parameter is always marked by the more compact mechanism, and the indirect value by the less compact one’ (77).

As Dixon (2000:77) notes, his findings agree with Comrie’s observation noted above, and with Haiman’s (1985) iconicity principle for the correlation between formal distance and conceptual distance. The problem with these approaches, however, is that the proposed correlations generally obtain only within single languages and that they do not make cross-linguistic predictions. Even within a single language, the suggested correlations may not hold. For example, Dixon considers lexical causatives to be more compact than morphological causatives, hence the former align with direct causation and the latter with indirect causation. If we compare pure lexical causatives in Japanese and productive morphological causatives (the *-sase* forms), the correlation obtains. But we noted earlier that Japanese also has irregular morphological causatives (e.g., *kawak-as-* ‘dry (tr.)’, *ak-e-* ‘open’). According to Dixon’s criterion, these tend to be more compact than the *-sase* forms (e.g., *mi-sase-* ‘make see’, *aruka-se* ‘make walk’) but less so than lexical causatives. Now, these irregular morphological causatives do not express an intermediate meaning between direct and indirect causation; rather they align themselves with pure lexical causatives and have the direct causative function. The same can be said about the fusional forms of Marathi (e.g., *maar-* ‘kill’), which qualify as a morphological type, but which align with pure lexical causatives in expressing direct causation.

A similar problem is seen between pure lexical causatives and one type of morphological causative and between another type of morphological causative and the periphrastic causative in Amharic. According to Amberber (2000:317ff), Amharic has at least the following four types of causative; (pure) lexical (e.g., *motə* ‘die’: *gəddələ* ‘kill’), the *a-* morphological causatives (e.g., *mət’t’a* ‘come’: *a-mət’t’a* ‘bring’), the *as-* morphological causatives (e.g., *mət’t’a* ‘come’: *as-mət’t’a* ‘cause to come’; *k’wərrət’ə* ‘cut’: *as-k’wərrət’ə* ‘cause to cut’), and a periphrastic construction involving the verb *adərrəgə* ‘to make’ (e.g., *aster ləmma wadə bet ind-i-hed adərrəgə-čč* [A.L. to home comp-IMPERF+3M-go+IMPERF make+PERF-3F] ‘Aster made Lemma go home’). Amberber’s discussion indicates that the less productive *a-* morphological causatives, which apply only to inactive intransitives, align with the pure lexical causatives in expressing direct causation, whereas the more productive *as-* morphological causatives align with the periphrastic constructions in expressing indirect causation. Regarding the latter functional alignment, Amberber (2000:321) says that: “The periphrastic can apply to both intransitive and transitive verbs and its meaning is indistinguishable from the causative *as-*.” The fact that the more compact *a-* morphological forms are marked for the direct value in contradistinction to the less compact *as-* morphological forms bears out Dixon’s prediction. The problem, however, is that these two types of morphological causative

do not form a group of their own and function as a group vis-à-vis pure lexical causatives or periphrastic causatives in the language as predicted by Dixon's approach. They split up and each morphological group aligns with the other two types along the productivity parameter.

The problem here originates from Dixon's use of the term 'lexical causatives' and in his purely formal classification. The term 'lexical causatives' has been used by Shibatani (1973/1975, 1976a) in the functional sense and in reference to those forms that need to be learned individually (because of irregularity in form) and to be listed in the lexicon. For him, the distinguishing criterion has been productivity and the distinction drawn has been between lexical and productive causatives, the latter of which may be morphological or syntactic. Under this interpretation, the term 'lexical causatives' subsumes both what we called pure lexical causatives – those morphologically unanalyzable forms – and irregular forms, which may be morphologically analyzable like the Japanese forms in the right-hand column in (33) and those irregular Turkish forms discussed above. This decision, reached independently, is consistent with the practice of Leningrad typologists, who restrict the term 'morphological causative' to those formed on a regular and productive basis: "Causatives formed by a regular and productive means will be called *morphological*. *Lexical* causatives are such as are formed by a non-productive means" (Nedyalkov and Silnitsky 1973: 7; see Masica 1976: 58–59 for a relevant discussion). While basically formal in approach, Comrie (1981: 170) recognizes, on the basis of the Japanese data discussed by Shibatani (1976a), the possibility that certain non-productive morphological causatives may align with lexical causatives in their function.

Now consider the *-ku/-ra/-ta* causative suffixes in Tarascan. As discussed by Maldonado and Nava in this volume, the most lexically restricted *-ku* suffix produces direct causatives, whereas more productive *-ra* and *-ta* cover a wider range of causative situations including direct and indirect situations. The productivity parameter, not the formal length or compactness, makes a better prediction for the form-function correlation even within a single language.

A purely formal classification like the one Dixon (2000) proposes not only fails to make correct predictions about the form-meaning correlation of certain morphological causatives, but also fails to make cross-linguistic predictions in a straightforward manner. For example, Japanese productive *-sase* forms are morphological and accordingly more compact than periphrastic constructions like the English *make* causatives. But the former are not correlated with a more direct value than the latter – both typically express indirect causation (as well as sociative causation). To see this, observe the cross-linguistic patterns of form-meaning correspondence in the semantic map given as Table 4 in the next page.

The overall cross-linguistic form-meaning correlation observed in Table 4 indicates that the notion of productivity is a better predictor than a purely formal

Table 4. Semantic map showing the distribution of causative forms⁷

Quechua		
Lexical	<i>-či</i>	
Turkish		
Lexical	<i>-dür/-t</i>	
Japanese		
Lexical	<i>-sase</i>	
English		
Lexical	<i>make/have</i>	
Korean		
Lexical (<i>-i/-hi/-li/-ki</i>)		<i>-key ha-ta</i>
Marathi		
Lexical (<i>-aw</i>)		<i>laaw-Ne</i> 'apply' <i>de-Ne</i> 'give'
DIRECT	SOCIATIVE	INDIRECT

criterion. The most telling example is the Amharic data discussed above. The less productive forms (pure lexical causatives and the *a-* morphological forms) express direct causation, whereas the more productive forms (the *as-* morphological forms and the periphrastic construction with the verb *adərrəg* 'to make') correlate with indirect causation. The same is true with Tarascan suffixes *-ku/-ra/-ta*, which have the same formal degree of compactness in causative formation. Cross-linguistically, productive forms align (whether they are morphological or periphrastic) in expressing indirect causation, and lexically restricted forms align (whether they are morphologically unanalyzable or morphologically complex) in expressing direct causation.

As the preceding discussion should have made clear, productivity itself is gradient: some patterns are more productive than others. For example, Marathi *-aw* causatives are lexically restricted, just like those formed via change in internal segments (see (4)). But, the *-aw* forms are more productive than other lexically restricted forms in the sense that more verbs are related by this suffix than by other means (cf. (4) with (14) and (15)). From our point of view both types of causatives belong to the lexical causative group, but they differ in the degree of productivity. Similarly, Korean *-i/-hi/-li/-ki* causatives (e.g., *po-i* 'show', *kel-i-*

‘make walk’), must be learned separately (other morphologically plausible forms such as the following do not occur; **o-i-* ‘make come’ or **tali-ki-* ‘make run’), just as unanalyzable forms such as *ccic-* ‘tear (tr.)’ and *yel-* ‘open (tr.)’ are. Yet there are a fair number of causative verbs that are related by the *-i/-hi/-li/-ki* suffixes to the non-causative counterparts, suggesting a certain degree of regularity in this derivation.

Our account based on the notion of productivity predicts that, among those lexically restricted and listed in the lexicon individually, the ones showing a degree of productivity might lean toward the indirect end of the directness dimension more than ones that lack productivity. This prediction is borne out. In both Marathi and Korean, the *-aw* and *-i/-hi/-li/-ki* forms express not only direct causation but also sociative causation, whereas other lexical causatives in these languages are restricted to the direct causative function. The relevant portion of Table 4 actually looks like the following:

Table 5. Distribution of more and less productive lexical causatives in Marathi and Korean

Marathi		
lexical	(- <i>aw</i> forms)	
lexical		
Korean		
lexical	(- <i>i/-hi/-li/-ki</i> forms)	
lexical		
DIRECT	SOCIATIVE	INDIRECT

The cline of productivity from the highly regular morphological and syntactic causatives to the limited productivity of certain forms in the lexicon is best understood in terms of historical change. That is, a productive process may narrow down the scope of its application and may lose its productivity. This kind of narrowing phenomenon is observed in the Korean *-i/-hi/-li/-ki* forms. Comparison of Middle Korean (ca. 15th century) and Modern Korean shows that there was a wider range of *-i/-hi/-li/-ki* forms in the former than the latter. For example, Middle Korean texts include expressions such as *mwul-ul kil-i-ta* ‘make someone draw water’, *sal-i-ta* ‘make someone live’, *tung-ul kulk-hi-ta* ‘make someone scratch the back’. These are no longer usable in Modern Korean, and their meanings must be expressed by the periphrastic *-key ha-ta* construction, which came to be used more widely after the 16th century. In Modern Korean, the majority of the *-i/-hi/-li/-ki* causative forms are correlated with inactive intransitive verbs, with the smallest

number of correlations instantiated by base transitive verbs (cf. the Athapaskan pattern discussed below). Recall that the Marathi *-aw* sociatives are also largely correlated with intransitives, and are less favored with transitive verbs than the available periphrastic constructions (see Section 3). We hypothesize that this narrowing of the domain of coverage and eventual lexicalization of a productive process is driven by the force of grammaticalization.

A large-scale pattern of grammaticalization and shrinkage in the coverage of the causative domain is reported for the Athapaskan family by Rice (2000). The case in point is the Athapaskan causative formative *ɬ* and its variant *h* in Slave. According to Rice, this formative is distributed in the following pattern across the members of the Athapaskan family.

(35) Bases for causativization (Rice 2000:212)

1. intransitive verb with patientive argument (all languages)
2. intransitive verb with agentive argument (Ahtna, Koyukon, Carrier, Navajo)
3. both intransitive verb and transitive verb (productive) (Koyukon)

Our interpretation of this pattern is that causativization by means of the formative *ɬ* was once highly productive as in Koyukon throughout the language family. Progression of grammaticalization has had the effect of shrinking the domain of coverage, however, paving a way for a periphrastic construction to fill in the vacuum created (Rice 2000:211; cf. Payne's discussion in this volume on the lexical causative suffix *-(t)ag* in Asheninka). Rice's examples indicate that the forms following the pattern of (35-1) express direct causation; *we-go* 'it is dry': *yé-h-go* 'he/she dried it' (Slave). Some forms following the pattern of (35-2) express sociative causation or perhaps indirect causation; *nee-yo* 'he arrived': *yeenee-ɬ-yo* 'he arrived walking him, he made him walk' (Koyukon); *heesh-aal* 'I step along, shuffle along': *biyee-ɬ-shááɬ* 'I walk (baby) along (by holding its hand)'; *gha-t-na* 'he was working': *ighe-ɬ-na* 'he is making him work' (Ahtna). The Koyukon transitive-based causatives following the pattern (35-3) include the following, which are clearly indirect causative in meaning:⁸ *ts'eh nedaa-l'onh* 'he is wearing a hat': *ts'eh yendaa-ɬ-onh* 'she let him wear a hat'; *eet needaal-tset* 'he (quickly) put his hand there': *yaayedaanee-ɬ-tset* 's/he made him touch it, s/he put his/her hand on it.' (Koyukon).

In other words, the distribution pattern in (35) correlates with the pattern of coverage of the directness domain, as shown in Table 6 next page.

Again, it is the most productive use of the causative formative, as in Koyukon, that covers the indirect causative domain, with the most restricted use associated with direct causation – the relevant morphological make-up, however, remains constant throughout the family.

Table 6. Distribution of morphological causatives in the Athapaskan family

Koyukon (all types of verb)		
Ahtna, Carrier, Navajo (active/inactive intransitive verbs)		
others (only inactive intr. verbs)		
DIRECT	SOCIATIVE	INDIRECT

As shown above, productivity of the construction correlates more accurately with the directness parameter and makes cross-linguistic comparison more straightforward, because it does not refer to the formal mechanism involved. On the other hand, we do see definite correlation between Dixon's (2000) compactness parameter and productivity. Lexically restricted forms tend to be more compact than highly productive constructions. This phenomenon is due to the grammaticalization process, which tends to lead to attrition of form along with semantic bleaching. Thus grammaticalization of causative constructions has the effect of lexicalization of the expressions (from more productive to less productive processes) with concomitant narrowing of the coverage of the semantic domain, and of formal reduction in size.

One may still want to ask why the observed alignment is between lexical causatives and direct causation and between productive forms and indirect causation rather than the other way around. We believe that this alignment represents an iconic relation between form and meaning, but in a more abstract way than suggested by Haiman (1985). What distinguishes productive morphological causatives and periphrastic constructions from lexically irregular forms is the degree of morphological transparency of the causative element. A higher degree of morphological transparency correlates with a higher degree of separability of elements corresponding to the two event segments constituting a causative situation. Our claim is that this separability of the component elements making up a causative expression correlates with the distinguishability of the causing and the caused event segments making up a causative situation. In the case of indirect causation, the relevant event segments are distinguishable more clearly, for they tend to have distinct spatiotemporal profiles (see Fig. 2 in Section 2). In the case of di-

rect causation, however, the two event segments are more tightly integrated, for they share the same spatiotemporal profile (see Fig. 1 in Section 2).

6. Causative/Applicative syncretism

In this final section we shall examine a phenomenon that points to the reality and significance of the proposed intermediate category of sociative causatives. The case in point is causative/applicative syncretism. In a fair number of languages, causative morphemes are associated with the applicative function of introducing a comitative, instrumental, or benefactive argument. One of the most divergent patterns is seen in the Australian language Yidiny, where Dixon (1977:293–322) identifies six senses associated with the derivational suffix *-nga-l*. These include the causative, the comitative, and the instrumental, as illustrated below:

- (36) a. bimbi:ng nganyany wudingalnyu (Causative)
 father.ERG I.ABS bring up.ngal.PAST
 ‘Father brought me up.’
- b. wagudangu wagal nyina:ngal (Comitative)
 man.ERG woman.ABS sit.ngal
 ‘The man is sitting with [his] wife.’
- c. gini buyal bama:l dumba:dingal
 penis.ABS strong.ABS person.ERG swive.di.ngal
 bunya-nda (Instrumental)
 woman-DAT
 ‘The man will swive (copulate with) the woman with [his] strong
 (i.e., erect) penis.’

Although Dixon (1977:313) states that the ‘[v]erbal suffix *-nga-l* can be attached to verbs of any semantic type,’ there does seem to be a semantic basis for the causative/applicative split with such a form. Indeed, Austin’s (1997) survey of Yidiny and other Australian languages indicates that verbs that form causatives center around inactive intransitives such as FALL, STAND, and SPLIT/SEPARATE, whereas those that form applicatives include such typical active intransitives as RUN, LAUGH, PLAY, and TALK/SPEAK (see below).

Similar causative/applicative syncretism is seen among Amerindian languages and elsewhere. As reported by Ichihashi-Nakayama (1996), the Hualapai verbal suffix *-wo* and its phonological variants derive both causative and benefactive forms, exemplified below:

- (37) a. nya-ch wamiye:yu
 I-SUBJ I.be.mad-AUX
 ‘I am mad.’

- b. bos nya nyi-háda-ch wà-nyi-miye:-wo-k-wi
 cat I REL-pet-SUBJ (be.mad)-3/1-be/mad-APPL-3-AUX
 ‘My cat makes me mad.’
- (38) a. nya-ch he’ yo:v-wi-ny
 I-SUBJ dress 1/3.make-AUX-PAST
 ‘I made a dress.’
- b. nya-ch he’ nyi-yo:v-ò-wi-ny
 I-SUBJ dress 1/2-make-APPL-AUX-PAST
 ‘I made you a dress.’

Ichihashi-Nakayama (1996:232), based on the following list of predicates, identifies the agentivity vs. state/emotion distinction as the basis of the causative/benefactive split:

Verb roots yielding causative meaning	Verb roots yielding benefactive meaning
<i>wamiya:</i> ‘be mad’	<i>swa:d</i> ‘sing’
<i>wayala:y</i> ‘be angry’	<i>dadaha:d</i> ‘work’
<i>diye:</i> ‘be mean’	<i>yo:v</i> ‘make’
<i>wasavla:y</i> ‘be mean’	<i>gwa:m</i> ‘drive’
<i>mi:</i> ‘cry’	<i>gaga:v</i> ‘buy’
	<i>dathgwi:l</i> ‘wash’
	<i>gana:v</i> ‘tell’

A similar situation is observed in Malay transitivity involving the suffix *-kan*, which produces (among others) benefactive and causative forms.

- (40) Malay (Yap 1996:5)
- a. Dia beli kereta baru.
 3SG buy car new
 ‘He/she bought a new car.’
- b. Dia beli-kan saya kereta baru.
 3SG buy-APPL 1SG car new
 ‘He bought me a new car.’
- (41) Malay (Yap 1996:4)
- a. Bilek itu besar.
 room the large
 ‘The room is large.’
- b. Dia besar-kan bilek itu.
 3SG large-CAUS room the
 ‘He/she enlarged the room.’

Adding the *-kan* suffix to agentive verbs generally does not yield causatives in Malay, where the normal way of causativizing active predicates is by syntactic means involving the verb *buat* ‘make/do’ or *bagi* ‘give’ as below:

- (42) Malay (Foong Ha Yap, p.c.)
- a. Aku buat budak (i)tu lari dua batu.
1st:SG make/do child the run two mile
‘I made the child run two miles.’
- b. Aku bagi budak (i)tu lari dua batu.
1st:SG give child the run two mile
‘I had/let the child run two miles.’

Thus we recognize a strong tendency among these languages to avoid the morphological causativization of active verbs, and to assign an applicative function to the causative morphemes found with active verbs. The causative/applicative split is rather curious when the relevant constructions are viewed from a simple valency-changing perspective. With respect to causatives, Dixon (2000:30) tells us that he ‘prefer[s] a different characterization [from semantic ones like the one proposed here involving event structure] – a causative construction involves the specification of an additional argument, a causer, on to a basic clause.’ True, both causativization and applicativization increase verbal valence. Yet these two operations have diametrically opposed syntactic consequences. In the words of Dixon (2000:31): ‘causative adds a new A [subject] argument ... and applicative adds a new O [object] argument.’

Understanding the unity behind these disparate valency-increasing processes requires a semantically based understanding of causative constructions. We suggest that the applicative meanings of comitative, instrumental, and benefactive forms be connected to sociative causatives. As is clear from the earlier discussion on Marathi and Japanese causatives, sociative causatives involve the causer’s active participation in the execution of the caused event – in many cases even to the extent of the causer’s performing an act identical to that of the caused event. Leading someone by walking with him hand in hand is a typical situation conveyed by the Marathi sociative causative *tsaal-aw-Ne* ‘to make someone walk’. The Japanese form *asoba-seru* ‘to make someone play’ can express a situation where the causer is playing with the causee, as in the case of a mother and a child. It is easy to derive a comitative reading from these. The comitative meanings of ‘I walk with him’ and ‘I play with her’ are derivable from ‘I make him walk by walking with him’ and ‘I make her play by playing with her,’ as the former are entailments of the latter. Notice that in some languages the causative of WALK and GO may have the meaning of ‘to lead’ as in the Svan form *kätzelälne* walk.CAUS.AOR (Sumbatova 1993:259) and the Dogon form *go-nd-* go.out-CAUS ‘lead out’ (Plungian 1993:392).

We assume that the instrumental reading arose from a similar entailment relationship between a causative expression and an instrumental applicative meaning. If someone causes a knife to cut the meat, he/she is in effect cutting the meat with a knife, because a knife cannot cut meat independently from the causer agent who actually uses it.

Benefactive reading can also be derived from the sociative causative. Besides the independent connection between a benefactive verb and a causative construction (as in the case of the *de-Ne* ‘give’ permissive causative in Marathi and elsewhere), a sociative causative such as *tsaal-aw-Ne* ‘to make walk’ can be construed with an ‘assistive’ or ‘benefactive’ meaning; ‘I walk with someone (e.g., a small child) by holding his hand so that he will be able to walk’ or ‘I walk for him (so that he can walk)’. Indeed, in some languages causative forms do have an assistive reading; cf. Svan forms *x-alaš-nun-e* ‘[s/he] causes [someone] to saw’; *xakwter-nun-e* ‘[s/he] helps [someone] to steal’ (Kulikov 1993: 133).

Our account above is corroborated by Austin’s (1997) study of causative/applicative syncretism in Australian languages. The verbs likely to undergo applicative derivation center on those expressing the meanings of GO, RETURN, RUN, PLAY, SIT, STAND, and LIE. These are activities most susceptible to either joint-action or assistive causation. Also relevant to the present discussion is the fact that Cora has developed from the *-te* causative suffix a comitative applicative function only in deictic movement verbs such as RUN AWAY and ARRIVE (see Vázquez Soto, this volume).

More difficult to explain are the verbs LAUGH and CRY, whose causative forms often appear to have the effect of adding a new object nominal, the resulting constructions with meanings such as ‘laugh at someone’ and ‘cry over something’. It seems that what we have here is some kind of realignment of the causer and the causee vis-à-vis grammatical relations. That is, the straightforward causative expression of the type ‘he causes me to laugh’ and ‘it made me cry’, where the causer nominal is understood to be non-agentive, has undergone the realignment, yielding the expression type ‘I laugh at him’ and ‘I cried over it’. Notice that the latter are entailments of the former.

Ichihashi-Nakayama (1996) accounts for the causative/benefactive split in terms of the availability of role slots. When the affecting participant (agentive) slot is open (as in the case of inactive verb roots), a causative form results, and when the affecting participant slot is occupied (as in the case of active verb roots), a newly introduced argument must occupy the affected participant slot, yielding a benefactive reading. This analysis, although plausible for the Hualapai verbal suffix *-wo* and similar cases, leaves much unaccounted for. The crux of the problem is, why does the Hualapai *-wo* suffix fail to host two agents, when Quechua *-ĕi* and Japanese *-sase*, for example, permit two agents and express indirect causation? Causative morphemes differ in the ways they accommodate two agents. On the

one hand, there are causative suffixes such as Japanese *-sase*, which typically express indirect causation involving two agents. Quechua *-či*, which expresses both direct and indirect causation, and the Marathi *-aw* suffix also convey sociative causation with two co-participating agents. These have not developed an applicative function associated with the causative suffix. On the other hand, there are such restricted affixes as the Hualapai *-wo* and the Malay *-kan*, which, accommodating only a single agent, uniquely express direct causation, and have developed an applicative function for a situation involving two agents. Yet there are others in which both two-agent causative and applicative readings are sanctioned, as in Bella Coola and Kinyarwanda:⁹

- (43) Bella Coola (Saunders & Davis 1982, slightly regularized)
- a. tx-is ?aleks ti-qlsx^w-tx (Transitive)
cut-he/it Alex -rope-
'Alex cut the rope/Alex is cutting the rope.'
 - b. tx-a-Ø ?aleks x-ti-qls^w-tx (Intransitivized via Antipassive)
cut-INTR-he Alex PREP...-rope-
'Alex is cutting a rope.'
 - c. tx-a-tus ?aleks mat x-ti-qls^w-tx
cut-INTR-he/him Alex Matt PREP...-rope-
(i) 'Alex cut the rope for Matt.'
(ii) 'Alex made/let Matt cut the rope.'
- (44) Kinyarwanda (Kimenyi 1988)
- a. Umugóre a-ra-andik-iish-a íbarúwa íkarámu.
woman she-PRES-write-INSTR-ASP letter pen
'The woman is writing a letter with a pen.'
 - b. Umwáalímu a-ra-som-eesh-a abányéeshuúri ibitabo.
teacher he-PRES-read-CAUS-ASP students books
'The teacher is making the students read books.'

What is needed in explaining these situations is a dynamic model that can represent different degrees of lexicalization. Our account involves placing these different causative affixes at different points along a directness dimension of the causative semantics. Those affixes toward the indirect end accommodate two agents, whereas those toward the direct end reflect the pressure of lexicalization and accommodate only a single agent, thus requiring a reassignment of the causee agent. Our account places Hualapai *-wo* and Malay *-kan* toward the left side of the semantic space in Table 4, where the causative constructions express direct causation involving an agentive causer and a patientive causee. That is, these suffixes, having undergone a high degree of lexicalization, cannot host two agents, as pure lexical causatives normally cannot; hence the causative meaning is associated only with the forms

deriving from inactive intransitive verbs. Bella Coola causative inflection and Kinyarwanda *-Ish* suffix, on the other hand, have not undergone lexicalization to as high a degree as the Hualapai and the Malay case, allowing ambiguous expressions ranging over the causative and the applicative meaning.

Our point is that (a) the causative/applicative syncretism is seen when there is a sociative reading associated with the causative constriction, and (b) the split occurs at an advanced stage of grammaticalization/lexicalization. As discussed in the Introduction to this volume (see Section 1.1), a maximal event structure lexicalizable as an atomic unit can include at most one agent. Complex forms turning into unitary lexical units via grammaticalization conform to this constraint on lexicalization.

The account above, showing that the causative/applicative split results from the pressure of lexicalization, finds some support in languages where the causative/applicative syncretism is observed only in expressions more advanced in lexicalization. For example, Stefanowitsch, this volume, reports that the non-productive transitivizing suffix *-ba* in Akawaio is observed in certain sociative verbs such as *binimba* ‘to walk someone, to walk with someone, to carry some one’ that are related to intransitive verbs, e.g., *bininö*.

Matses, as described by Fleck, this volume, also has lexically restricted causative suffix *-ua*, which yields causatives when attached to inactive verbal roots (e.g., *uënës* ‘die’: *uënësua* ‘kill’; *noad* ‘float’: *noadua* ‘make float’). When this suffix occurs with active verb roots, it has the applicative function (e.g., *nua* ‘lie’: *nuaua* ‘lie to or about someone’; *shubi* ‘cry’: *shubiua* ‘cry for someone’). On the other hand, the productive Matses causative suffix *-me* has not fully developed the applicative function.

According to Martin (2000), Creek (Muskogean family; southeastern United States) has two causative suffixes *-ic* and *-ipeyc*. Martin considers the former causative forms, though common in the language, to be ‘almost certainly learned rather than created spontaneously’ (394). For this reason Martin does not isolate the *-ic* suffix by a hyphen in his examples, as opposed to the longer *-ipeyc*, which he clearly segmentizes as an indication of its productivity. Our discussion above suggests that the lexicalized forms are associated with direct causative situations and the productive forms with indirect causation; and this correlation is correct, according to Martin. Martin also notes sporadic association of the lexicalized *-ic* form and the applicative function of adding an object.

In a similar vein, the more grammaticalized causative preverbs in Sikuani have applicative functions, but the less grammaticalized suffixal causative form has not developed the applicative use (see Queixalós, this volume).

Finally, in Yukaghir, the first causative suffix *-š* (which derives typical direct causatives) allows a ‘comitative-causative’ meaning, whereas the second, longer causative form *-š-čil’ê* (which derives indirect causatives) has a pure causative

meaning; *ewrê-* 'to go, to walk' > *ewrê-š-* 'to lead, to carry' > *ewrê-š-čil'ê-* 'to cause somebody to go' (Maslova 1993:273).¹⁰

7. Summary and conclusion

In this paper we argued for a semantically oriented approach to causative constructions. In the first place, a more rigorous definition of the popular terms such as 'direct' and 'indirect' causation must be proposed. We have refined the definitions using event structure, which explicates the different relationships that the causer and the causee participant may hold with respect to the caused event. In the case of direct causation, the causer's action carries over to the caused event, whereas in indirect causation the caused event enjoys an autonomous status free of the causer's intervention. The difference between the two is reflected in the differences of the spatiotemporal profiles associated with the causing and the caused event.

We have shown that an important intermediate category of causation bridges the direct and the indirect situation in such a way as to turn the entire directness dimension of the causative semantics into a continuum. The reality and the importance of the intermediate, sociative causatives are seen in their connection to the applicative function that causative formatives are associated with in a fair number of languages.

Finally, the form-function correlation is shown in a semantic map, which plots out the semantic domains that different causative formatives cover. The semantic map also reflects the pattern of grammaticalization/lexicalization. It has been shown that the notion of productivity is more significant in the form-function correlation than the formal characteristics of causative constructions, though the two are correlated to a great extent because grammaticalization affects them.¹¹

Our paper has attempted to demonstrate the importance of taking semantics as a starting point for description and analysis. Superficial formal differences are indicative of historical developments, but they tend to depend on the overall morphological typology of a language in question, for productive processes may be realized either as periphrastic constructions or morphological operations depending on whether the language is strongly isolating or agglutinative.

Notes

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1. See Section 2 of the Introduction to this volume.
2. Note that in many languages, including Japanese, indirect causation involving a patientive causee is not expressible – see (1c). Those languages that have recruited verbs of communication such as SAY/TELL and SHOUT/CALL for indirect causative constructions are expected to impose this restriction, at least in the early phase of grammaticalization of these verbs.
3. Contrastive length in vowels is indicated by doubling the symbol. Consonants in upper case are retroflex.
4. Note that analytic causatives may express sociative situations. The point, however, is that they also express indirect causative situations, unlike *-aw* sociative forms. In other words, analytic causatives express a wider range of causative meaning and thus show a partial functional overlap with other types that express more limited ranges of meaning.
5. Incidentally, the German *lassen* causative is also sensitive to the active/inactive contrast in the base verb; it yields only a permissive *let*-causative reading when inactive intransitives are involved; *Man liess den Swimmer ertrinken* ‘They let the swimmer drown’/*They made the swimmer drown.’ (Akio Ogawa, p.c.)
6. Notice that the forms more advanced in semantic bleaching show a closer connection to the main verb in the active voice; cf. *I made/had him leave* vs. *I forced/persuaded him to leave*.
7. The representation in this table countenances a gross simplification in order to highlight the characteristic distribution patterns shown by different constructions in different languages. The continuum model advocated in this paper demands a finer representation where one type of causative actually merges with another. In all these languages, one type of causative form fills a gap obtaining in another type, such that a productive *sase*-form in Japanese, for example, is recruited to express direct causation, when there is no lexical causative available. In other words, the domain of the productive *sase*-form, in reality, extends over to the domain of direct causation. Also some languages may contain a highly abstract causative form that covers the entire span of the directness dimension functionally overlapping with other forms. English *cause* is such a form. It is far less frequently used than other causatives in daily conversation precisely because of the vagueness of its meaning.
8. Rice identifies these causatives as direct causatives. See Section 2 of the Introduction to this volume.
9. Some languages show a causative/applicative overlap in some verbs – e.g., Yidiny *bila-* ‘go in’: *bila-nga* ‘go in with/put in’ – while the split is observed elsewhere (Dixon 2000).
10. In this section we have assumed that the applicative use develops from causatives. It is equally plausible that causatives develop from applicatives via overlapping semantics discussed in the text. Payne, this volume, shows that the development in Asheninka is: causative < applicative. Valenzuela, this volume, points out the possibility of interpreting an associative applicative expression in Shipibo-Konibo as a sociative causative. Also Zavala, this volume, notes that the Olutec applicative prefixes give rise to a causative sense (e.g., ‘We are going to take a walk with the grandfather’ > ‘We are going to take the grandfather for a walk,’ ‘That woman is dancing for him’ > ‘He is making that woman dance’). In this connection, it is worth noting that a reciprocal morpheme is also a source for sociative, assistive, and comitative constructions. See a brief discussion on this in Nedyalkov and Silnitsky (1973: 13), and

Nedjalkov and Nedjalkov (forthcoming) on Yakut, Shkarban and Rachkov (forthcoming) on Tagalog, and other languages in Nedjalkov (forthcoming).

11. It is generally believed that grammaticalization has the effect of making the use of a particular lexical item more general and regular as it becomes a grammatical morpheme. What we have been discussing in the latter part of this paper is concerned with a final stage of grammaticalization, where a regular grammatical morpheme, together with a stem form, becomes lexicalized and shows morphological irregularity. In the evolution of a causative morpheme, there could be two stages where it is not quite productive. In the initial stage, where a verb such as 'tell/say' is recruited for a causative construction, it is likely that this verb applies to a situation where the causee is a human agent. It may then generalize and expand its coverage to include inanimate causees. This is the most regular and productive stage. The morpheme in question then may begin lexicalization, whereby expressions involving inanimate causees become lexicalized in the sense that they are no longer related to non-causative forms by a regular morphological process.

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Causation, constructions, and language ecology: An example from French

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1. Introduction

This paper provides an analysis of French analytical causative constructions. The term “construction” is used here in the way it has been used in recent work in Construction Grammar (Fillmore, Kay, and O’Connor 1988; Goldberg 1995 *inter alia*) as well as Cognitive Grammar (Langacker 1991, 1995; Achard 1998). Constructions are described as: “form-meaning correspondences that exist independently of particular verbs.” (Goldberg 1995:1). In this view, in addition to the meaning of the individual lexical items that compose an analytical causative, the construction itself provides its own semantic import, independently (in some measure) from its component parts. The four constructions investigated in this paper are presented in (1)–(4). Obviously, these forms do not constitute a comprehensive account of all the ways of expressing causation in French. They simply represent the most established analytical causative patterns.

- (1) *Marie a fait pleurer sa soeur* (VV)
‘Mary made her sister cry’
- (2) *Marie a laissé sa soeur pleurer* (VOV)
‘Mary let her sister cry’
- (3) *La situation économique a forcé Jean à renoncer à ses vacances* (VOàV)
‘The economic situation forced John to renounce his vacation’
- (4) *Le président a été obligé de démissionner* (OVdeV)
‘The president was forced to resign’

The construction illustrated in (1) is called VV in Achard (1996, 1998). The infinitival complement directly follows the causative verb, and the logical subject of the

infinitive (the causee) follows the infinitive. This is the famous '*faire* construction' often referred to in the syntactic literature. VV is obligatory following *faire* 'make', and optional following *laisser* 'let' (and the perception verbs). The construction illustrated in (2) is called VOV in Achard (1996, 1998). The causee precedes the infinitive. This construction is optional following *laisser* and the perception verbs. The construction in (3) is quite similar to VOV, with the exception of the presence of the preposition *à* 'to' between the causee and the infinitival complement. It will be referred to as VOàV. It occurs with verbs such as *amener* 'bring', *pousser* 'push', *inciter* 'incite', *forcer* 'force', *obliger* 'oblige', *contraindre* 'constrain'. Finally, the construction in (4) has a passive orientation. The causee is in subject position, and the preposition *de* 'of' precedes the infinitive. It occurs with the verbs *contraindre* 'constrain', *obliger* 'oblige', and *forcer* 'force'.

The analysis of the structures presented in (1)–(4) centers around the three following points. First, the constructions have their own meaning, to be characterized as the specific kind of causative episode they code. These episodes vary along several dimensions such as the level of integration of the caused event into the causing event, or the degree of agentivity of the causee for example. Secondly, the causative constructions naturally assemble out of the global French ecology when particular expressions (verbs, prepositions, or complement forms) are recruited to code perceived contrasts in a causative scene. The argument in favor of this position is twofold. On the one hand, each construction is internally semantically consistent, that is to say the co-occurrence restrictions between its component parts are determined by the kind of episode it codes. On the other hand, each component part selected to depict a given configuration in a causative scene encodes a closely related configuration in different (non-causative) scenes. Thirdly, the constructional level represents the appropriate level of analysis because it is the meaning of the construction as a whole (as opposed to that of specific component parts) that speakers extend to cover new related situations.

The paper is structured in the following fashion. Section 2 presents the conceptual base with respect to which the meaning of the constructions is characterized. Section 3 introduces the meaning of the constructions. Section 4 addresses the issue of the formation of the constructions. Section 5 presents the extension of the constructions' meaning to cover new situations. Section 6 recapitulates the results and concludes the paper.

2. The causative domain

The starting point of the analysis is to investigate each construction's meaning. One of the most basic principles of Cognitive Grammar (Langacker 1987, 1991) is that

the meaning of linguistic expressions (including grammatical constructions) is best characterized as the specific kind of construal their presence imposes on a common conceptual base. Most of the work in the cognitive tradition has considered causation against the more general background of force dynamics (Talmy 1976, 1988). I will follow this tradition here and show that each construction profiles a particular kind of coerced dynamic interaction.

Langacker's notion of an action chain captures our folk conception of how energy is transmitted, and it provides a useful starting point to the discussion of the conceptual base with respect to which the meaning of the causative constructions gets established. The action chain model is represented in Figure 1:

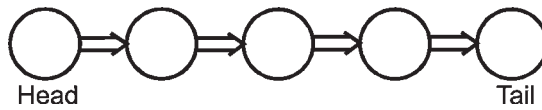


Figure 1. Action chain (from Langacker 1991)

The head of the action chain (the agent) initiates the energy to be transmitted. The transmission of energy is represented in the diagram by the double arrows. The entity immediately downstream from the agent is an instrument. It doesn't initiate any force per se, but it transmits the energy inherited from the agent to the patient, the entity at the endpoint of the action chain.

A causative construction can be represented as a three participant action chain. The first transmission of energy represents the main (causing) event. The main clause subject is the initiator of the energy to be transmitted along the chain. The second transmission of energy (represented by the second arrow) represents the subordinate event. The causee (the intermediate entity in the chain) performs that event, but it is initiated (caused) by the agent. To take just a brief example, in *Marie a fait faire la vaisselle à Jean* 'Mary made John do the dishes', Mary is the agent that provides the initiating energy. The causee John is coerced into performing the process of washing the dishes. In this case, *la vaisselle* is the tail of the action chain.¹

Clearly, the type of causative scene described by models such as the one in Figure 1 is very abstract. Each element of the chain schematically represents a multitude of specific instances that exhibit widely diverging values on the respective scales that define their semantic import. For example, the agent and causee roles abstract over a great many entities that occupy different values on a scale of agentivity and volition. Similarly, the causing force can be instantiated by a variety of specific examples at different degrees of strength or directness for example. In addition to analyzing each element individually, it is therefore crucial to consider the way in which particular values for each participant tend to co-occur to describe specific causative episodes. For example, Shibatani and Pardeshi (this vol-

ume) note that: “lexical causatives (i.e. transitive) verbs are associated with inactive intransitive verbs, while the productive causatives are associated with active intransitive and transitive verbs.” The reason for these associations is that lexical causatives usually code situations where the causee is patient-like whereas productive causatives code a certain degree of agentivity of the causee. These clusters of related properties indicate that languages code internally consistent episodes, that is to say episodes where the agent, causee, and causing force exhibit a predictable relation toward each other. Each of those episodes is formally coded by a specific construction whose meaning is in some measure independent from that of its parts.

In order to characterize that meaning, we need to precisely describe the kind of causative episode it captures. Consistent with the cognitive tradition, the formal differences between constructions iconically reflect perceived differences in the episodes they code (Haiman 1985). In the next section, I show that the causative episodes described by the constructions in (1)–(4) differ along two dimensions. The first one is the level of integration of the two events. I argue that VV, VOV, and VOàV represent three different stages on a continuum of event integration (Givón 1980; Shibatani and Pardeshi this volume). The second dimension concerns the vantage point from which the caused event is considered.

3. Meaning of the causative constructions

In approaching the meaning of the constructions, it is important to bear in mind two aspects of verbal complementation pointed out by Givón (1980, 1990). The first one is that the syntactic realization of the complement is determined by the conceptual relation which binds it to the main verb. The second one is that the markings on the subordinate clause correlate with the degree to which the event coded in that clause approximates an independent event.

3.1 VV and VOV

Structural evidence from clitic placement and embedded negation clearly establish VV as a monoclausal construction and VOV as a biclausal one. On the basis of that evidence, I proposed in earlier work (Achard 1993, 1996, 1998) that VV and VOV represent different stages in the coding of the complement scene as an independent event. VV construes the scene as one single event. The subordinate process is fully integrated into the main process to form a complex verb. Its argument (its logical subject) is an argument of that complex verb. With VOV, on the other hand the caused event is construed as an independent event. The causative scene therefore codes two events.

In the above mentioned work, I argue that the most important factor that motivates this difference in construal concerns the status of the causee as the energy source which generates (or at least sustains) the infinitival process. It is the presence of that separate energy source which validates the construal of the complement scene as an independent event. For example, in *J'ai laissé Marie courir*, the construal of *Marie* as the energy source of the running process not only explains why this particular entity is the specific target of the (potential) force, but it also validates the construal of the running event as an independent event. The construal of the causee as an energy source is therefore the necessary condition to a two event causative episode. The force is applied to a particular entity responsible for the occurrence of the subordinate event. If the causee is not construed as an energy source, sole responsibility for the occurrence of the caused event lies with the agent. Since it is not construed as being initiated by a separate source, the caused event has no independence, and can thus be integrated in the causing event. VV codes that kind of episode. The construction profiles only one event, which includes both the main and subordinate processes into a single complex form. The logical subject of the infinitive is not construed as the main participant in the subordinate process, but as the object of the complex verb. The absence of a separate energy source prevents the complement scene from being construed as an independent event, and explains its integration in the main event.

The best kind of evidence of the relevance of the notion of energy source to the distribution between VV and VOV comes from the cases following *laisser* 'let' where the two constructions are in competition. The following data are taken from Achard (1996).

- (5) a. *J'ai laissé brûler le gratin* (VV)
 b. ??*J'ai laissé le gratin brûler* (VOV)
 'I let the casserole burn'
- (6) a. *J'ai laissé brûler le feu jusqu'à l'aube* (VV)
 b. *J'ai laissé le feu brûler jusqu'à l'aube* (VOV)
 'I let the fire burn until dawn'
- (7) a. *Mon voisin a encore laissé sonner son réveil pendant une heure* (VV)
 b. *Mon voisin a encore laissé son réveil sonner pendant une heure* (VOV)
 'My neighbor let his alarm clock ring for one hour again'

Note the difference between (5) and (6). *Le gratin* in (5) is a patient. It cannot be considered the source of the burning. Its use with VOV in (5b) is thus infelicitous. *Le feu* in (6) is also inanimate, but it is not a patient. It has greater potential for generating (or at least sustaining) the process in the complement. We know that fires are not self-generated. They require outside energy sources: wood, oxygen etc.

However, in front of a roaring bonfire, we tend to forget the energy provided by those outside elements. The momentum gathered by the fire gives it a life of its own, as if it were indeed self-generating. Its role relative to the burning process is very different from that of the casserole in (5). It is not the patient in the burning process, but is rather conceived as a full-fledged energy source. It is therefore not surprising that it can appear in the VOV construction in (6).

When an entity is involved in a process over a long period of time, it becomes possible to consider it responsible for that process, even if it merely performs a function it has been programmed for. In (7), the alarm clock does what it has been set to do. However, after its ringing has gone on for some time, the clock can be considered responsible for the ringing, even though the true energy source of the process is the person who set it. One of the cognitive capacities that we have is to give instruments designed to perform a certain process the ability to generate that process.

The difference in the degree of agentivity of the causee lies at the core of the difference in the causative episodes respectively coded by VOV and VV. If it is construed as agentive enough to be a valid source for the infinitival process, that process can be viewed with some level of independence from the causing event. If, on the other hand, the causee is not construed as a valid energy source, the caused event is incorporated into a complex event, and the causee is coded as the object of the complex verb.

We can now consider in slightly more detail the cognitive operations of profile assignment that allow the two constructions to have their specific forms. There is nothing surprising about these operations, because they are all independently attested in other constructions. The relation profiled by the main verb can be viewed as the kind of contact established with the complement scene by some conceptualizer. Contact is generally established with a particular entity of the scene, which we will call “salient”.² In the case of VV and VOV, the infinitival process as a whole and the main participant in that process (the logical subject of the infinitive) are in direct competition for initial salience, i.e. the point at which conceptual contact is established with the scene in the complement. The linguistic coding of that scene as VV or VOV depends on which of these two entities is initially salient. For expository reasons, the preliminary exploration of these notions is restricted to vision. The analysis, however, covers the other senses as well as causation.

The prototypical object of vision is a thing (in the CG sense), but things can always be considered against the background of some activity or process, even if that process is merely standing still. In the situations where that background is not particularly relevant, it has minimum salience, and is therefore not explicitly mentioned. The participant alone, or object of seeing, is salient. In *J’ai vu Paul* ‘I saw Paul’ for example, *Paul* is the object of seeing. The activity he is involved in is in

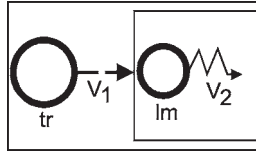


Figure 2. Profiled participant: transitive construction

the background, with a minimum degree of salience. This profile is representative of transitive constructions. It is illustrated in Figure 2.

In Figure 2, the subject (*j'*) is the primary figure in the relation profiled by the verb, and thus identified as elaborating the trajector of that verb. The participant in the complement scene (*Paul*) is the secondary figure in the relation profiled by the main verb. It is thus identified as the landmark of that verb. The activity the participant is involved in is not profiled.

The reverse situation can also occur, where the complement process itself as a whole (the activity) is the object of the perception verb, and the participant in that process has minimum salience. In *J'ai regardé jouer* 'I watched (the) playing' for example, the process of *jouer* as a whole is salient, and thus recognized as the object of the main verb. The subordinate process necessarily involves participants, since *jouer* is not an impersonal verb, but these participants have minimum salience and they are not explicitly mentioned. The bare infinitive construction illustrated in *J'ai regardé jouer* is presented in Figure 3.

In Figure 3, the subordinate process itself (*jouer*) is the secondary figure in the relation profiled by the main verb, and thus identified as the landmark of that verb. The participant in the complement process does not have individual salience, and it is therefore not profiled. The transitive construction and the bare infinitive construction present straightforward cases of profile assignment, because only one entity is in profile. In that sense, these two constructions can be viewed as the two endpoints of a continuum of perceptual salience between the infinitival process and the participant involved in that process. VOV and VV represent intermediate cases, where both participant and infinitival process are in profile. The difference between the two constructions rests on which entity of the complement scene is initially salient.

In VOV, illustrated by *Jean laisse Marie partir* 'John lets Mary leave' for example, the main participant in the subordinate process is initially salient because of its role as the energy source of that process. It is therefore recognized as the primary landmark of the profiled relation. The process that participant is involved in is also profiled as a secondary landmark of that relation. The main verb therefore has two complements. One is the participant, the other the process as a whole. This construction is presented in Figure 4.

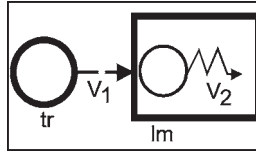


Figure 3. Profiled process: bare infinitive construction

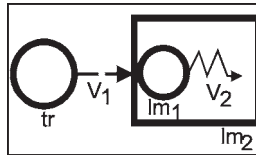


Figure 4. Participant and process in profile: VOV

VOV has the semantic structure described in Langacker (1991:410). Its trajector is the perceiver/agent, its primary landmark is the trajector of the subordinate process; and that process, taken as a whole, functions as a secondary landmark. The trajector and the primary landmark are elaborated by nominals respectively identified as subject and direct object. The secondary landmark is elaborated by an infinitival complement. In our example, the main clause subject *Jean* elaborates the trajector of *laisser*. The logical subject of the infinitive *Marie* elaborates the primary landmark of that verb. The infinitival process *partir* functions as a secondary landmark to the causative verb.

The particularity of VV is that the construction involves the focal “readjustment” of the elements of the base. The process itself has initial salience, but the participant subsequently becomes salient. In terms of the analysis presented here, that readjustment can be analyzed as two successive cognitive operations of secondary figure (landmark) assignment. First, in a way similar to the bare infinitive construction, the complement process as a whole is recognized as the landmark of the main verb, while the participant in that process remains unprofiled. The result of that cognitive operation is the formation of a complex verb. Secondly, in a way similar to the transitive construction, the participant in the subordinate process is recognized as the landmark of that complex verb.

VV is illustrated in Figure 5. The two figures in Figure 4 (marked as 1 and 2) represent the two consecutive cognitive operations needed to perform the focal readjustment required by the construction. They represent the compositional path (Langacker 1991) of the construction.

During the first cognitive operation, VV takes a process as a complement but does not give particular focal status to a participant. The landmark of the percep-

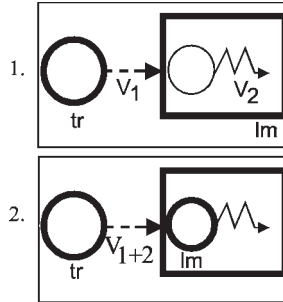


Figure 5. Focal readjustment: VV

tion/causation verb is the infinitival process; the participant in that process is not profiled. The choice of the subordinate process as the landmark during the first cognitive operation represents the derivation of a complex verb. As the result of a second cognitive operation, the logical subject of the infinitive is recognized as the landmark of the complex verb, and thus identified as the direct object of that verb. Taking *Jean fait partir Marie* as an illustration, during the first cognitive operation, the infinitive *partir* elaborates the landmark of the causative verb *faire*, and thus derives the complex verb *faire pleurer*. During the second cognitive operation, the nominal *Jean* elaborates the landmark of that complex verb, and is therefore marked as a direct object.

Despite its specific structure, VV is not cognitively different from the other constructions. It merely represents the linguistic coding of one possible configuration of relative salience between the subordinate process and the participant in that process. Its most seemingly surprising trait, namely the focal readjustment imposed on the complement scene, is cognitively quite plausible. Even in a situation where the process itself may have initial salience, it is very hard to ignore its main participant altogether. The recognition of the logical subject of the infinitive as the landmark of the complex process acknowledges its intrinsic salience. That salience explains that the participant can only be left unprofiled under very specific conditions, as attested by the severe constraints placed on the bare infinitive construction (Achard 1993). The focal readjustment of VV is thus best viewed as the natural recognition of the salience of a participant in a process, in a situation where the process itself is initially more salient. Note that under this analysis, the profile of VV is very similar to that of a transitive clause. The result is fully consistent with Kemmer and Verhagen's (1994) claim that a transitive clause constitutes the conceptual template relative to which the causative of intransitives is formed.

3.2 VOàV and OVdeV

Two additional constructions deserve our attention, namely VOàV, and OVdeV. VOàV is illustrated in (8)–(13). For the sake of convenience, the causative constructions are indicated in bold face print.

- (8) *Les interventions enflammées en faveur de l'ordre ont été très applaudies. Mr Gorbatchev, lui, a expliqué que **les événements du Caucase avaient amené l'Etat à recourir à la force** "contre les extrémistes."*
 'The enthusiastic interventions in favor of order have received a lot of applause. As for M. Gorbatchev, he explained that the events in the Caucasus had lead the state to resort to violence "against the extremists.'
- (9) *La baisse des restitutions (subventions à l'exportation) décidée récemment par Bruxelles sur le porc a conduit les producteurs du Danemark à se retourner vers le marché communautaire, la France principalement.*
 'The decrease of the restitutions (subsidies to exportation) recently decided by Brussels on pork drove the producers from Denmark to turn back to the community market, particularly to France.'
- (10) *Samedi matin, le seul incident de cette mission modèle avait été une fuite sur un déshumidificateur, survenue jeudi 11 janvier. Elle a obligé les astronautes à se livrer à une chasse aux gouttelettes d'eau (5 à 8 litres au total) qui, en raison de l'apesanteur, flottaient dans la cabine et se collaient sur les parois.*
 'On Saturday morning, the only incident of that model mission was the leak in a humidifier that occurred on Thursday January 11th. It obliged the astronauts to chase water drops (5 to 8 liters total) that were floating in the cabin due to gravity et got stuck on the walls.'
- (11) *Mr Ladislav Adamec, alors premier ministre d'une Tchécoslovaquie conservatrice, déclarait voici quelques mois: "Le COMECON est complètement inefficace et a forcé ses membres à dépendre des pays capitalistes."*
 'M. Ladislav Adamec, then the prime minister of a conservative Tchechoslovakia declared a few month ago: "The COMECOM is totally inefficient and it forced its members to depend on the capitalistic nations.'
- (12) *Un événement dramatique a incité François Camille Cron à porter témoignage sur le cours monotone de ses jours.*
 'A dramatic event incited François Camille Cron to give testimony about the monotone course of his days'
- (13) *L' "AFFAIRE Lawson" est autrement plus grave que l' "affaire Westland," qui avait contraint, en 1986, le ministre de la défense, Mr Michael Heseltine, à claquer la porte.*

‘The “Lawson affair” is much more serious than the “Westland affair,” that constrained the secretary of defense M. Michael Heseltine to slam the door in 1986.’

The construction occurs with verbs such as *inciter* ‘incite’, *conduire* ‘drive’, *amener* ‘bring’, *pousser* ‘push’, *induire* ‘induce’, *forcer* ‘force’, *contraindre* ‘constrain’, and *obliger* ‘oblige’. It is formally only distinguishable from VOV by the presence of the preposition *à* ‘of’ preceding the infinitive. From a conceptual standpoint, it represents one step further in the dissociation between the main and subordinate events. The main features of VOV can also be observed with VO*à*V. The causee is construed as the energy source that performs the infinitival process, and that process is viewed as a separate, independent event. The increased separation of the main and subordinate events is reflected by the presence of the preposition *à* which makes explicit the path that leads the causee to the process in the complement.

The notion of a path toward a goal is inherent to the meaning of *à*, as documented in Kemmer and Bat-Zeev Shyldkrot (1995). The main thesis in Kemmer and Bat-Zeev Shyldkrot is that the lexical meaning of the prepositions provides the motivation for the cases where their meaning is less obvious, as for example when the prepositions precede infinitival complements. In their lexical uses, *à* and *de* ‘from’ indicate spatial relations. Since Talmy (1974, 1983), the semantics of spatial relations is analyzed using the notions of “figure” and “ground”. The figure is the object whose location is being described, the ground is another object or location with respect to which the figure is being located. The meaning of *à* “includes both temporal and spatial relations involving one point: either static location of the figure at a point, or a dynamic motion of the figure along the path to a specified point.” Kemmer and Bat-Zeev Shyldkrot (1995:360).

This characteristic of the preposition motivates its use in more grammaticalized contexts, as for example with infinitives such as *Jean commence à comprendre* ‘John is beginning to understand’. Kemmer and Bat-Zeev Shyldkrot (1995:367) claim that: “the notion of a path towards a goal is also, we would claim, central to the meaning of *à* as coding a relation between the subject referent, which represents the figure, and a ground, represented by the action or process coded by the infinitive. The figure is construed to follow a path to the ground via the process designated by the main verb; and the path involved can be characterized, as a first approximation, as the active application of the subject to the goal of carrying out the action named by the infinitive.” The preposition’s meaning in VO*à*V is very

similar. It codes the path that leads the causee toward the accomplishment of the process in the complement. Importantly, that path is not initiated by the causee, but induced by the agent. It is made specific as a direct result of the interaction between the agent and the causee. The path's explicit mention obviously enhances the separation between the main and subordinate events by situating them in two clearly different spatio temporal locations.

VOàV, VOV, and VV thus clearly represent three different stages on a continuum of event integration, where the degree of phonological separation between the two verbs iconically represents the closeness of the events they respectively code. In addition, there exists another kind of iconic relation between the phonological length of each construction and the degree of grammaticalization of the causative verbs that participate in it. The longest one, VOàV occurs with many different verbs that have their full lexical meaning. At the other end of the continuum, VV occurs with *faire* alone, whose meaning is bleached to the point of being close to that of an auxiliary.³

Finally, the OVdeV construction is illustrated in (14)–(19).

- (14) *Quoi que puisse laisser croire la réputation de Mr Krenz, le régime va bien être obligé d'opérer des changements.*
 'Whatever M. Krenz' reputation leads you to believe, the regime will certainly be obliged to initiate changes.'
- (15) *Le 22 juillet, au terme d'une journée de négociation, Jean Castarède, et avec lui les responsables de la chambre de commerce, est obligé de céder à l'ultimatum.*
 'On July 22nd, following a day of negotiations, Jean Castarède, and with him the representatives of the chamber of commerce, is obliged to surrender to the ultimatum.'
- (16) *Tout candidat à un nouveau putsch contre le général Noriega sera forcé de tenir compte du traitement que l'homme fort du Panama a réservé aux rebelles qui, comme le commandant Giraldi, avaient épargné sa vie et l'ont payé de la leur.*
 'Any candidate to a new coup against general Noriega will be forced to take into account the treatment that Panama's strong man reserved to the rebels who, like commander Giraldi, had spared his life and paid for it with theirs.'
- (17) *Un président du jury peut bien demander "amicalement" à un correcteur de relever ses notes, mais celui-ci n'est pas forcé d'obtempérer'; souligne un professeur de philosophie.*

'A jury president can certainly ask an examiner to raise her grades in a friendly way, but the latter is not forced to agree, a philosophy professor notes.'

- (18) *Mr Honecker, qui avait succédé à Walter Ulbricht en 1971 à la tête du Parti communiste (SED), avait été contraint de démissionner de ses fonctions le 18 octobre 1989.*

'M. Honecker, who had succeeded Walter Ulbricht to the lead of the Communist party in 1971 had been constrained to resign his post on October 18, 1989.'

- (19) *Depuis l'entrée au gouvernement de Mr Michel Durafour, la majorité régionale ne compte plus que soixante-quinze membres sur un effectif total de cent cinquante et un conseillers régionaux. Comme les ministres à l'Assemblée Nationale, Mr Millon se voit donc contraint, dans sa propre région, de ménager tantôt la gauche, tantôt le Front National pour faire aboutir ses projets. Cet exercice d'équilibre sera toutefois plus difficile.*

'Since M. Michel Durafour entered the government, the regional majority only has seventy five members out of a total of one hundred and fifty one regional representatives. In a way similar to the National Assembly, M. Millon sees himself being constrained, in his own region, to placate either the left or the national front to achieve his goals. This balancing act will nonetheless be difficult.'

The construction occurs following verbs such as, *contraindre* 'constrain' *forcer* 'force', and *obliger* 'oblige', which are also felicitous with VOàV. Its most striking characteristic is its passive orientation. The main verb has either passive morphology as in (14)–(18), or middle morphology as in (19). The effect of both kinds of constructions is that the agent is defocused. In fact, in my whole corpus, the agent is specifically mentioned only once. It is also often impossible to locate it precisely. This is the case in (14). The subject's position is occupied by the causee *le régime*. The latter doesn't initiate the process of *opérer des changements*. It is located downstream from an unspecified energy force, diffuse and subjectively construed (Lan-gacker 1985) to the point of possibly being interpreted as broadly as the current circumstances in general.

It is important to note that the specificity of the construction doesn't come from its passive orientation per se, because a similar orientation can be found with VOàV, as illustrated by the contrast in (20) and (21).

- (20) *Marie a été amenée à renoncer à ses vacances*
'Mary was led to renounce her vacation'

- (21) *Marie a été contrainte de renoncer à ses vacances*
'Mary was constrained to renounce her vacation'

The example in (20) illustrates the narrowing down of the focus to the intermediate part of the action chain. The result is the defocusing of the agent's role. The emphasis is placed on the subordinate event and the causee's coercion to perform it. The form of the construction otherwise remains unchanged. The example in (21) presents a similar narrowing of the focus on the causee and her forced participation in the complement process, but the preposition *de* instead of *à* indicates the presence of a different construction. I propose that the difference between the two constructions primarily arises from the causee's specific attitude with respect to the complement process. More specifically, *VOàV* presents an action of the causee, whereas *OVdeV* codes her reaction. The difference between the two might appear trivial, but it has important ramifications. With *VOàV* in (20), *renoncer à ses vacances* is presented as an option *Marie* chose, even though that choice was made under pressure. With *OVdeV* in (21), the same process is viewed as *Marie*'s sole alternative, some event that imposes itself on her and that she has no other choice but to perform.

The difference between action and reaction is indicative of a more radical difference between the two constructions, namely a difference in viewing arrangement (Langacker 1985, 1991; Achard 1998). I would like to tentatively suggest for now that with *OVdeV*, the caused event is presented from the vantage point of the causee (the subject in this construction), as if the latter were experiencing the coercion to perform the infinitival process. This is particularly visible with the *se voir* verb form illustrated in (19). The balancing act the causee (*Mr. Millon*) is currently involved in is presented as it is unfolding from the eyes of its most central participant.

The viewing organization of the causative episode therefore represents the relevant dimension with respect to which the differences between *VOàV* and *OVdeV* need to be characterized. *VOàV* profiles the whole dynamic interaction from an external vantage point, the speaker being the default case. All aspects of the interaction (agent, causing force, causee, path to the caused event, caused event) are objectively construed and profiled. With *OVdeV*, the dynamic exchange is viewed internally, from the causee's vantage point. The coercive force is construed subjectively. It is diffuse, and its origin is impossible to trace to a well-delineated entity. For example in (19), the coercive force can be viewed as the new circumstances brought about by the changing configuration of a local assembly. That force, however, is not presented objectively, as originating from a well identified participant, but more subjectively as part of the local atmosphere which forces the causee to react in the way evoked in the complement.

4. How do constructions get formed: Motivation, compatibility, and usage

After investigating the constructions' meanings, we can now address the issues of their form and place in the global ecology of the French language. The first part of this section stresses the internal consistency of the constructions, that is to say the way in which the selectional restrictions that exist between their component parts are determined by the kind of episode they profile. The second part emphasizes the relations that exist between the causative constructions and other non-causative constructions. The component parts' role in causative constructions is shown to be closely related to the role those same elements play in other constructions. Based on those two points, and using Langacker's Usage-Based model (Langacker 1988, 2000), I propose a tentative scenario of the way in which the four constructions might have become conventionalized in their specific form. It is obvious that a satisfactory account of the development of causatives cannot ignore their history, but diachronic considerations would take us too far beyond the scope of this paper. The following analysis should therefore not be taken as a detailed account of the formation of causative constructions in French, but as a more synchronic exercise of how specific constructions might get conventionalized.

4.1 Internal structure of the constructions

It was argued in Section 3 that each construction represents a specific causative episode. In formal terms, we therefore expect that its component parts (main verb, agent, causee, preposition) will all conspire to express that episode. This section explores the constructions' internal semantic consistency, and shows that the selection of their component parts is constrained by the kind of episode they profile. As expected, the formal differences between the constructions are motivated by differences in the episodes they code.

VV was shown to code the forced occurrence of an event without any regard for the causee's role in performing that event. *Laisser* appears in the construction if the causee cannot be considered the energy source of the subordinate process, but with *faire*, the construction is obligatory because it is the only one that matches the verb's lexical semantics. One lexical trait found across all the uses of *faire* is the subject's full responsibility for the thing/process/event evoked in the complement. This characteristic is visible whether the subject is animate as in *Jean a fait un gâteau* 'John made a cake', or inanimate, as in *La pièce a fait rire tout le monde* 'the play made everybody laugh'. The presence of this feature allows *faire* to perfectly semantically match up with VV, because the full responsibility of the subject is perfectly congruent with the main feature of VV, namely the causee's lack of agentivity. The full responsibility of its subject therefore makes it possible for *faire* to incorporate

the complement process into a complex verb, because the verb primarily evokes the realization of the subordinate process, not to the participant's role in generating that process. To present things in a slightly different way, we could say that its subject's responsibility for the occurrence of the complement process provides *faire* with the highest possible level of binding strength toward the subordinate process (Givón 1980), and therefore with the closest possible bond between the two verbs. Regardless of its own lexical semantics, the infinitival process is tightly connected to the main verb by virtue of being directly induced by the subject of that verb. The subject's full responsibility, and the ensuing lack of recognition of the causee's agentive role also accounts for *faire*'s infelicity with the other constructions, because the verb cannot provide the two separate energy sources required to generate a two event construction.

There are three formal differences between VOV and VOàV. The first one concerns the kind of main verbs acceptable in the constructions. The second one concerns the presence of the preposition *à* with VOàV, and the third one involves the fact that the caused events in VOàV need to code a conscious voluntary process. These three differences are all motivated by the specific kind of event respectively profiled by the two constructions.

Although both constructions present two events, and therefore involve the direct interaction between the main subject and the causee, both being construed as valid energy sources, they diverge as to the origin of the caused event. With VOV, that event originates with the causee, who willingly (in the majority of cases) sets it in motion. With VOàV, the causee not only doesn't initiate the caused event, but she resists it with varying degrees of strength. That difference obviously explains the different selectional restrictions between the constructions and the main verbs that occur with them. *Laisser* is straightforwardly incompatible with VOàV because its subject is only a potential agent who chooses not to interfere with an ongoing situation, while the construction demands the explicit mention of the causee's resistance to the complement process. By comparison, the resistance of their object represents a central characteristic of verbs such as *amener*, *pousser*, *contraindre*, *forcer*, *obliger*, etc. Due to lack of space, I will not provide a detailed analysis of each verb. I will concentrate on *forcer* because the resistance of its object is a central part of its meaning.

The use of *forcer* with an inanimate object necessarily implies that that object is somehow designed to prevent the subject from performing a certain activity. The data in (22)–(24) is taken from Achard (1998):

- (22) *Le voleur a forcé la serrure*
 'The thief forced the lock'
- (23) *La voiture a forcé le barrage de police*
 'The car broke through the police blockade'

- (24) **Il a forcé la boîte de conserve pour préparer son dîner*
 ‘He forced the can to prepare his dinner’

In (22), the function of the lock is to prevent illegal entry. In (23), the function of a police blockade is to stop cars. The use of *forcer* is felicitous because the subject overrides the resistance placed in her way with the purpose of stopping her. Even though the can in (24) might be more difficult to open than the lock in (22), it was not designed to stop anyone’s progress. The object’s lack of built-in resistance makes the use of *forcer* infelicitous. That feature of *forcer* is also present when the object is animate. However, in that case, resistance is expressed differently. In response to pressure, animates can change direction, adjust their behavior to elude it, even though they resent doing so. Furthermore, that change must be deliberate and (most of the time) consciously generated.⁴ This semantic property makes *forcer* as well as the other verbs that possess it a natural fit with VOàV.

The presence of the preposition *à* can likewise be attributed to the causee’s reluctance to perform the infinitival process. The path toward that process needs to be made specific because it represents a significant change of direction from the causee’s original intention, as the result of some external circumstances that act as an unwelcome trigger. In other words, the specific coding of the path leading to the realization of the infinitival process can be viewed as the expression of the causee’s resistance to that process. The kind of main verbs felicitous in the construction is thus consistent with the presence of the preposition. The causee’s change of direction, as well as her reluctance toward the realization of the infinitival process finds its natural representation in the specific mention of the path toward that process. The characterization of the path toward the infinitival process as indicative of the causee’s reluctance to perform that process emphasizes the exclusive compatibility of *à* with VOàV. With VV, the infinitival process is incorporated as part of a complex verb, and thus not viewed as the endpoint of a path. With VOV, the causee initiates the infinitival process and does not exhibit any resistance toward it.

Finally, whereas most processes can occur as the infinitival complement with VOV, only conscious, volitional processes are felicitous with VOàV. This is illustrated in (25) and (26):

- (25) *Marie a laissé Jean tousser tout le matin*
 ‘Mary let John cough all morning long’
- (26) **Marie a forcé Jean à tousser tout le matin*⁵
 ‘Mary forced John to cough all morning long’

The examples in (25) and (26) show that the spontaneous reaction verbs are not possible as the caused event in VOàV. This constraint is once again motivated by the specificity of the event coded by the construction. Recall from Section 3 that an important aspect of *à*’s meaning involves the active application with which the

subject carries out the infinitival process. In VO \grave{a} V, even though she is coerced into performing the infinitival process, the causee nonetheless needs to act volitionally, with full conscience of what engaging in the infinitival process entails. It is thus expected that the only possible processes are the ones that can consciously be entertained.

There are two formal differences between VO \grave{a} V and OV de V. The first one is a difference in the main verbs that can participate in the constructions, and the second one concerns the presence of a different preposition in each construction. Here again, these two differences reflect the kind of episode the two constructions code.

Recall that among all the verbs that occur with VO \grave{a} V, only *contraindre* 'constrain', *forcer* 'force', and *obliger* 'oblige' can also appear with OV de V. These three verbs evoke the highest level of force, and they provide the causee with the least amount of reactive choice. That level of force has no noticeable consequences when the whole dynamic interaction is construed. However, when the focus is on the causee and her participation in the complement process, the sheer force of coercion the three verbs evoke presents the causee as immersed in the complement process and thus motivates the possibility of viewing that process from her perspective.⁶ The shift in viewpoint naturally triggers the reorganization of the construction's viewing configuration. In particular, it forces the subjectification (diffusion) of the coercive force to the point where it becomes part of the surrounding circumstances. For example, in (21), *Marie* represents the vantage point from which *renoncer à ses vacances* is considered, thus emphasizing the point that this course of action is imposed on her. The main force remains an unprofiled part of the base.

The high level of coercion *contraindre*, *forcer*, and *obliger* denote is also responsible for the presence of the preposition *de* in OV de V. Let us first note that the construction is not compatible with \grave{a} , because the causee is presented as reactive. The caused event is viewed as imposed on the causee, and not as a goal toward which she actively applies herself. On the other hand, the meaning of *de* doesn't include the notion of a path. Kemmer and Bat-Zeev Shyldkrot (1995) argue that in infinitival constructions, the preposition marks the intrinsic relation that exists between the action designated by the main verb and that designated by the infinitive. Because that relation is quite schematic, it is only specifically mentioned in the absence of a more specific relationship, such as the one coded by \grave{a} . Since \grave{a} is incompatible with OV de V, *de* marks the intrinsic relation existing between the processes coded by the main and subordinate verbs.

4.2 Relation with other constructions

Constructions are not only internally coherent, they also exhibit consistent relations with other non-causative constructions in the language. The structures pre-

sented in (1)–(4) obviously make use of the resources found in the global French ecology, and these resources assemble into specific patterns in different contexts to create an array of form meaning pairs we call constructions. Consequently, although causative constructions represent unique ways of coding specific meanings in a causative context, their component parts are also used in other contexts to express other meaning differences. Because language is mostly composed of coherent patterns, we would expect the meanings associated with specific parts of causative constructions to be related to the meanings those parts code in other constructions. For example, VV's syntactic shape, namely an inflected verb followed by an infinitive is attested in a number of constructions. We would thus expect the meaning this shape codes in a causative context to be closely related to the meaning it represents in other contexts. This section examines those meaning correspondences for the four causative constructions previously investigated.

A sample of the constructions that share the V+INF form with VV is presented in (27). (27a) presents an auxiliary form, (27b) a motion construction, and (27c) a modal. (27d) and (27e) illustrate control constructions when the main and subordinate subjects are coreferential:

- (27) a. *Jean va jouer dans le jardin*
 'John will play in the garden'
 b. *J'ai couru chercher le journal*
 'I ran (to) get the paper'
 c. *Marie doit faire attention avant de traverser la rue*
 'Mary must be careful before crossing the street'
 d. *Est-ce-que vous voulez revenir avant la nuit?*
 'Do you want to come back before nightfall?'
 e. *J'adore me lever tard le week end*
 'I adore getting up late on the week end'

The most obvious trait these constructions share is the tightness of the bond between the events respectively coded by the main and subordinate verbs. That tight bond is explainable by the fact that in every construction, the subject of the main and infinitival processes are coreferential. The V+INF form therefore seems to represent the conventionalized way of expressing the tightest possible bond between two events throughout the French language.⁷

VV obviously differs from the constructions presented in (27) because the main and subordinate verbs have different logical subjects. However, as was argued in Section 3, the tight connection between the causing and caused event represents a crucial aspect of its meaning. We can therefore suggest that the V+INF form which is used in French to express the tightest possible relation between two events is recruited in the causative domain to code a situation where the agent is

construed as exclusively responsible for the occurrence of the caused event. In that analysis, VV's form is motivated by analogy with other constructions in the language where the V+INF shape expresses the tightest possible bond between two events. The main and subordinate verbs are treated in effect as if they had the same subject to express tight cohesion between the two events they evoke, and the logical subject of the subordinate verb is coded as the direct object of the complex verb, also by analogy with the lack of agentivity ordinarily displayed by direct objects.

VOV also exhibits striking similarities with constructions that share its syntactic form. Consider the motion construction in (28):

- (28) *J'ai envoyé Jean chercher le journal*
'I sent John (to) get the paper'

As it is the case in the causative domain, the logical subject of the infinitive precedes the infinitive, and it is also marked in the accusative.⁸ Both constructions share the characteristic of presenting two events where the second one is highly dependent on the first. The hybrid form of the construction, i.e. the accusative marking on the logical subject of the infinitive and its position preceding that infinitive (a subject position) represents the first step in the coding of two separate events. Here again, the VOV form is not specific to causation, but it is recruited in the causative domain to profile a situation where the causee's role as the energy source of the caused event makes it impossible to treat the entire causative episode as a single event.

The same kind of analysis can be given for VOàV. The construction codes one step further in the separation of the main and subordinate events by making the path toward the event expressed by the infinitival process specific. Here again, the form of the construction is very close to other constructions that share its goal orientation. Examples of such constructions are given in (29) and (30):

- (29) a. *Jean a donné une lettre à Marie*
'John gave a letter to Mary'
b. *Est-ce que vous avez demandé à vos parents?*
'Did you ask your parents?'
c. *Je n'ai pas téléphoné à mes parents depuis une semaine*
'I haven't spoken to my friends on the phone for a week'
- (30) a. *Je me suis enfin décidé à lui parler*
'I finally decided to speak to her'
b. *Les joueurs s'apprêtent à commencer le match*
'The players are getting ready to start the match'
c. *Les invités se préparent à partir*
'The guests are preparing to leave'

- d. *Marie ne s'attend pas à ce qu'il la reconnaisse*
 'Mary doesn't expect him to remember her'

The examples in (29) and (30) illustrate different kinds of constructions, but they share the general orientation of an entity moving toward an other entity (person, event, etc.). For example, in (29a), the recipient in the give construction can be construed as the endpoint (goal) of the path traced by the letter from its original source. Similarly, with the communicative verbs illustrated in (29b), the combination of metaphors "ideas are objects" (Lakoff 1987) and the "container metaphor" (Reddy 1979) makes the person from whom the information is requested the endpoint of the act of requesting. Finally, in the constructions illustrated in (30), the subjects exhibit the kind of active application toward the realization of the infinitival process that is characteristic of the causee with VOàV. The construction's syntactic shape is therefore also motivated by the existence of other constructions where similar component parts evoke comparable meanings.

Finally, the investigation of OV*de*V yields similar results. Even though the construction per se is restricted to causation, the use of the *de* preposition with infinitival complements is widely attested in French. I will only present the communicative verbs (31) as an example of other constructions where the logical subject of the infinitive reacts to an ongoing situation.⁹

- (31) a. *J'ai reproché à Paul de parler trop*
 'I reproached Paul to talk too much'
 b. *J'ai demandé à Marie de revenir*
 'I asked Mary to come back'
 c. *J'ai recommandé à Paul de ne plus voir Marie*
 'I recommended Paul no longer to see Mary'

The results are similar as with the other constructions. Similar syntactic forms are recruited to provide similar functions in different domains.¹⁰ As a way of recapitulating this section, we might suggest a possible way in which specific constructions arise out of the general ecology of a given language. The proposal needs to be understood relative to Langacker's Usage-Based Model (Langacker 1988, 2000). The model grants equal prominence to individual expressions and the organizational patterns that group them together. Expressions perceived as being similar are organized together in the form of constructional schemas, that is to say more abstract structures where the meaning differences between the specific instances are neutralized. Our linguistic knowledge therefore includes individual expressions as well as a variety of schemas at different levels of generality and entrenchment. Once a schema is entrenched and conventionalized, it becomes a template relative to which novel expressions are evaluated. For example, each causative construction presented in this paper can be viewed as a particular schema abstracted

over the specific instances where the construction is used. Each verb complement combination used in those constructions (V+INF, V+à+INF for example) represents another kind of schema abstracted over each occurrence of that combination in a number of constructions. Even though those schemas may not be fully conventionalized, they nonetheless constitute potentially useful form-meaning pairings, because their meaning is reliably expressed throughout a variety of constructions. Those forms can therefore be recruited to express similar contrasts in other domains, and thus help create novel constructions.

Let us take VV again as an illustration. The motivation for the construction comes from the social desire to code specific aspects of a causative scene. These aspects include the full responsibility of the main subject for the occurrence of the caused event, which in turn entails the union of the main and subordinate processes into a complex verb. Different resources from the ecology of French are used to meet those needs. Because of its lexical semantics, the verb *faire* is a prime candidate to provide the main verb. The V+INF form is also recruited because of its coding of tightly bound events in other constructions. Note that the use of V+INF in VV represents an extension of the construction because the latter usually codes the union of two events that have the same main participant. Once assembled in this way, the construction is unique; its argument structure is different from other related constructions, yet it shares predictable similarities with all of them.

5. The constructions in use

This section further contributes to establishing the relevance of the notion of construction for the analysis of causation by showing that constructions interact with other elements in the grammar in ways similar to other linguistic expressions. I first illustrate how two constructions can blend to provide the most accurate expression of a given situation. I then show how the constructions themselves (not their component parts) can be used as the base for semantic extensions that code new situations.

5.1 Mixed constructions

One of the advantages of constructions is their flexibility. They are in particular extremely useful to code hybrid events, that is to say events that do not exactly fit the pattern coded by one construction, but require elements from two (or more) constructions to be adequately represented. The example in (32) presents such a case.

- (32) *J'ai convaincu Paul de renoncer à ses vacances*
 'I convinced Paul to renounce his vacation'

The example in (32) illustrates a blend between a communicative construction illustrated in (31) and VOàV. In a way consistent with VOàV, the meaning of the utterance is factive, and the logical subject of the infinitive *Paul* is not preceded by a preposition. However, the presence of *de* is inconsistent with the form of the causative construction, because *à* is the only possible preposition in this configuration. In all likelihood, the preposition *de* is inherited from the communicative construction. The form of the structure following *convaincre* therefore blends together aspects from both causative and communication constructions to most suitably reflect the specificity of a situation where coercion is achieved through communication. Far from being problematic, this kind of hybrid situation is readily accommodated by the flexibility of the construction account.

The example in (33) illustrates the use of that flexibility for a particular strategic purpose.

- (33) *“Le sang a coulé. Personne ne peut le nier! Mais faut-il croire qu’il est écrit quelque part que le peuple algérien vivra à chaque fois dans sa chair l’appel des grands changements ?”, s’interroge le quotidien du soir Horizons. El Moudjahid, placé sous le contrôle du FLN depuis le comité central du mois de juin, pose des questions devenues opportunes aujourd’hui: “Octobre a-t-il été uniquement factieux ? A-t-il été seulement celui des échauffourées du vandalisme ?”; “Qui a incité, pourquoi et dans quels buts inavoués, les enfants terribles de Bab el Oued et de Bachdjarah de défier l’autorité, de la bousculer jusqu’à prendre le risque d’être fauchés par les balles aveugles ?”*
 “Blood was shed. Nobody can deny that! But must one believe that it is written somewhere that the Algerian people will live the great changes in its flesh every time?” asks the evening paper Horizons. El Moudjahid, placed under the control of the FLN since the June meeting of the central committee asks questions that have nowadays become relevant: “Has October only been seditious? Has it only been the month of outbursts of vandalism? Who incited, and for what hidden purpose, the restless children of Bab el Oued and Bachdjarah to challenge authority, to shake it so much as to take the risk of being cut down by blind bullets.”

There are four other examples similar to (33) in my corpus, where prepositional usage deviates from the one described earlier. The frequency of these exceptions is not high enough to question the validity of the description of the constructions, but each example must be explained individually, hopefully with independent evidence that a blending analysis is justified. Obviously, prepositional selection is ultimately a matter of speaker choice, and her motivation is sometimes difficult to capture.

However, the speaker's overall strategy can often be determined through her use of specific rhetorical patterns or lexical choices. If those choices can be shown to be congruent with the proposed analysis of the deviant example, it can be used as evidence for the plausibility of the analysis. I will simply consider the example in (33) here, but it is clear that a similar strategy should be used for each example.

The situation in (33) represents the only case where *inciter* occurs with *de*. Also, apart from the preposition, the configuration is that of VOàV. I suggest that this unexpected use of the preposition is validated by its use in OVdeV. Even though the causee appear active, their behavior is nonetheless presented as merely reacting to circumstances manipulated by unknown individuals. Rather than using the expected à that presents the realization of the complement process as the causee's active choice, the author selects *de* to stress the fact that the young people really had no choice but to react in a certain way because they were being manipulated. This analysis is consistent with the general tone of the passage where expressions such as *dans quels buts inavoués* 'for what hidden purpose' suggest strong forces pulling the strings from their off-stage position. The author's strategy can only be successful because *de*'s meaning is available to his readers from their knowledge of OVdeV and other constructions.

5.2 Causative constructions without causative verbs

The last argument in favor of the relevance of the notion of construction comes from the cases where the constructions themselves are used as the basis for semantic extensions. The examples in (34)–(37) illustrate structures similar to VV and VOàV that code situations quite different from regular causative situations. These constructions may not be attested in all dialects of French, but they are completely routine in my own dialect (Hautes-Alpes region in South Eastern France) to describe events of everyday life.

- (34) a. *J'ai mis chauffer l'eau*
 b. *J'ai mis l'eau à chauffer*
 c. **J'ai mis l'eau chauffer*
 'I put the water to heat up'
- (35) a. *J'ai mis sécher le linge*
 b. *J'ai mis le linge à sécher*
 c. **J'ai mis le linge sécher*
 'I put the clothes to dry' (I hung the clothes out to dry)
- (36) a. *Tu sais où sont les sacs pour mettre congeler les produits?*
 'Do you know where the bags are where you put products to freeze?'

- (37) a. *Le mécanicien a mis charger la batterie*
 b. *Le mécanicien a mis la batterie à charger*
 c. **Le mécanicien a mis la batterie charger*
 ‘The mechanic put the battery to charge’

These constructions are interesting for several reasons. First, their intended meaning is clearly causative. For example in (35), the speaker hung the clothes out (or put them in a dryer) so they can dry. The sentence is very close in meaning to *J’ai fait sécher le linge* ‘I dried the clothes’. The main difference is that the main verb *mettre* ‘put’ is not a causative verb.¹¹ In fact, none of the construction’s component parts has a causative meaning. If the sentences in (34)–(37) are indeed causatives, their meaning must be inherited from the constructions themselves. In fact, this is precisely what is expected from a constructional account, where the constructions are available for semantic extensions.

Secondly, even though *mettre* occurs with VV, its behavior is noticeably different from that of both *faire* and *laisser*, which are usually attested in the construction. It differs from *faire* because VV doesn’t constitute the only possible option (see the b examples), and it differs from *laisser* because VOV doesn’t constitute the alternative to VV. Rather, the possible choices include VV and VOàV, a combination of possibilities attested with no causative verbs. This clearly indicates that the main verbs are not merely used as substitutes for other causative verbs, but that specific causative constructions are selected because of their possible contribution to the kind of causative scene that needs to be described. A complete analysis of these examples is beyond the scope of this paper, so the remainder of this section merely examines the semantic and structural relations they share with the previously examined VV and VOàV, as well as the way in which they differ from them.

The data in (34)–(37) call for some observations. First, the context of use of the expressions is much more specific than that of regular causative constructions. Each example involves some machine or artifact designed to perform a specific function (stove, freezer, dryer, etc.). That function can therefore be anticipated. Placing an object in these machines results in a predictable change of state in that object. This predictability allows for the notion of causation to be recoverable, even though it is not expressed lexically anywhere in the construction. For example, we know from our world knowledge that placing a dish of food on a stove will heat it up. In this particular context, the motion involved in placing an object in or on a machine that alters it in a predictable way is equivalent to causing that object to be altered in that way. Causative constructions are prime candidates for the description of such scenes because they offer a very synthetic way of coding them. With VV for example, the complex verb is composed of the motion verb and the result of the interaction. The causee is the altered object. Most importantly, the notion

of cause and the machine or artifact where the dynamic interaction takes place are both left implicit, since both can be inferred from our general knowledge of the interaction. This explains the highly restricted character of these constructions. This compressed coding can only be deciphered inside a pragmatic situation where the precise dynamics of the interaction can be fully recovered.

As expected, the choice between the two constructions reflects differences in the construal of the entire episode. VV's selection represents the most synthetic way of suggesting causation by integrating the motion verb and the desired result into a complex process. This is usually reserved for processes where the resulting state comes about almost instantly. By contrast, the selection of VOàV is most felicitous to describe processes where the resulting state comes about more gradually. The difference between the two constructions is presented in (38) and (39).¹²

- (38) a. *Mets congeler les haricots*
 b. **Mets les haricots à congeler*
 'Put the green beans to freeze'
- (39) a. **Mets refroidir le lait*
 b. *Mets le lait à refroidir*
 'Put the milk to cool down'

The process of deep freezing is expected to occur abruptly. VV therefore represents the only possible choice. In the elicitation context of (39), the milk was placed on a windowsill. The process of *refroidir* 'cool down' is therefore much more gradual and VOàV alone is possible.

The uses of VV and VOàV in this specific context clearly constitute semantic extensions from their use in regular causative constructions. This is most strikingly illustrated with VOàV. First, there is no resistance on the causee's part. The latter is almost always an inanimate, and thus cannot change direction to avoid an unwanted situation. Secondly, the causee's path toward the infinitival process is reinterpreted as the time elapsed while the causee is undergoing its change of state (the cooking, freezing, or drying time for example). The important point is that because of the kind of contrast they express in regular causative situations, the two constructions can be recruited to express what is perceived as a similar contrast in this more specific domain.

6. Conclusion

This paper argued in favor of the relevance of the notion of construction for the analysis of causation in French. Three points have constituted the focus of investigation. First, the four structures illustrated in (1)–(4) were shown to have their

own meaning, and that meaning was characterized as the specific kind of causative episode they each code. Secondly, the constructions were shown to naturally assemble out of the global French ecology when particular expressions (verbs, prepositions, or complement forms) are recruited to code the relevant contrasts in a causative scene. Each construction's form was argued to be determined by the kind of episode it codes, and each component part selected to depict a given configuration in a causative scene was shown to encode a closely related configuration in a different (non-causative) scene. Thirdly, the constructional level was shown to represent the appropriate level of analysis because speakers extend the meaning of the constructions as a whole to cover new related situations. The analysis presented in this paper therefore affords at the same time a precise investigation of the each construction's specific nature as well as its position in the global ecology of the French language.

Notes

1. Note that even though *laisser* 'let' is usually considered a causative verb, its subject merely acts as a potential agent. It has the possibility of preventing the causee from performing the infinitival process, but elects not to do so.
2. This description of the difference between VV and VOV in terms of initial salience is quite abstract because the constructions also occur with the perception verbs. In terms more directly relevant to causation, the difference pertains to the entity that represents the initial target of the force. That target can be a whole event (make something happen) or a particular entity coerced into performing a given process (make somebody do something).
3. I am indebted to Masayoshi Shibatani for bringing this point to my attention.
4. Some verbs have that meaning metaphorically, such as *conduire* for example. The fact that a verb like *conduire* can be used in this construction is taken as evidence for the construction approach. The relation between the lexical meaning of the verb and its meaning in the construction may not be as straightforward as in the case of *forcer*. This is the case for verbs such as *amener* 'bring', or *pousser* 'push' for example.
5. This sentence would be felicitous if Mary were a stage director forcing an actor to redo the same action over and over again. In that case, *tousser* 'cough' would be construed as a conscious voluntary act.
6. It is hard to explain precisely why this alternative construal would be selected in this situation. One possible reason might invoke the notion of empathy one naturally feels with the causee (a fellow animate) when she has no choice but to engage in a undesirable event. Empathy is best expressed by adopting someone else's viewpoint. If this hypothesis is correct, we would expect the causee's vantage point to be adopted with the verbs that denote the strongest force because empathy is expectedly the highest when the situation is the most desperate.

7. This observation is fully compatible with Givón's (1980) analysis of complement structures in terms of binding strength.
8. The accusative marking is only visible when the nominal is cliticized. For example, in the cliticized form of (28) *Je l'ai envoyé chercher le journal* 'I sent him to get the paper', the *l'* form is in the accusative.
9. Obviously, the communicative verbs in (31) have less binding force than the causative verbs. This results in the causative construction being factive, whereas the communication construction is not.
10. The difficulty to provide a well delineated definition for the meaning *de*+INF complements code comes from the broadness of the preposition itself. The notion of intrinsic relation presented earlier can take different forms in different constructions.
11. The constructions illustrated in (34)–(37) can also occur with *porter* 'carry', and *envoyer* 'send'.
12. The infelicity of VOV in this context is clear. Under no circumstances can the causee be considered the energy source that initiates the infinitival process.

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Tarascan causatives and event complexity¹

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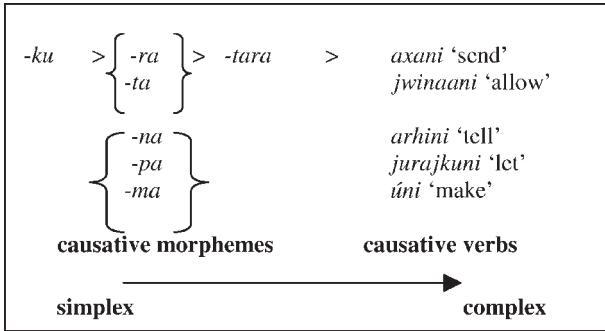
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1. Introduction

This paper proposes a systematic analysis of a somewhat atypical causative system, namely Tarascan. Our analysis will be based on the assumption that causative markers are selected depending of the complexity of the causative event. Event complexity will be determined by the degree of (in)dependence between the CAUSER and the CAUSEE. Tarascan is an isolated MesoAmerican language with rich verbal morphology and an equally rich causative system. Tarascan or P'orhépecha, as is known by native speakers, is a Mexican Indian language spoken in the Western-Central state of Michoacan. Although other dialects of Tarascan have been considered, almost all the data included in this paper are from Puacuaro, one of the towns that surround the Patzcuaro Lake.

The complexity of Tarascan causatives comes from the coexistence of a few lexical causative verbal roots with at least four causative suffixes that select specific stem classes according to some morphological or semantic regularity. As opposed to the general tendency of causative markers to mark intransitive verbs (Dixon 2000; Shibatani and Pardeshi, this volume), Tarascan can make causative constructions based on either adjective-like stems as well as intransitive, transitive and even ditransitive verbs. In (1) the causative construction is based on the ditransitive verb *arhini* 'tell'. The causative marker is the suffix *-ra*:

- (1) *Valeria arhi-ra-s-0-ti* *ma wantantskwa Yuyani-ni*
Valeria tell-CAUS-PERF-PRES-IND.3 a story Yuyani-OB
Adrianu-ni
Adrian-OB
'Valeria made Yuyani tell a story to Adrian'



Scale 1. Causative markers and event complexity

Another atypical property of Tarascan is that, causative markers can combine to derive complex causative constructions. In (2) direct causation is marked by *-ku* while indirect causation is depicted by *-tara*:

- (2) *Eratzini arhu-ku-tara-s-0-ti* *Adrianu-ni t'atsini-ni*
 Eratzin divide-CAUS-CAUS-PERF-PRES-IND.3 Adrian-OB beans-OB
 'Eratzin made Adrian divide the beans'

Moreover Tarascan has a number of verbs of causative meaning that form periphrastic causative constructions. In the main clause of example (3) *arhini* 'tell' designates some type of causation. In the subordinate clause *arhini* preserves its core meaning:

- (3) *Valeria arhi-s-0-ti* *Yuyani-ni eski arhi-a-ka*
 Valeria tell-PERF-PRES-IND.3 Yuyani-OB that tell-FUT-SUBJ
ma wantantskwa Adrianu-ni
 a story Adrian-OB
 'Valeria told Yuyani to tell a story to Adrian'

One purpose of this paper is to identify the stem types that each causative suffix selects and to offer an account for the type of causation each marker imposes. A no less important goal of this paper is to describe the possible restrictions and the motivations that determine the coexistence of two or more causative markers. Moreover we will attempt to identify the semantic and contextual distribution between morphological and periphrastic causatives. Finally we will try to define the semantic and cognitive principles under which causation operates in Tarascan.

We will defend the idea that causative markers in Tarascan are organized according to the degree of event complexity. In Scale 1 simplex events will align to the left, while complex causatives will go to the right.

Complexity is understood here as the degree of elaboration of the causative event. This implies that as the event gains complexity the initiative capacity of the causer and the actual action developed by the causee will be manifested in an increasingly transparent manner. Event complexity will also correlate with independence of action. In simplex events the causee will always undergo the change-of-state imposed by the causer; in more complex events, the causer's capacity to actually determine the causee's behavior will diminish. However, event complexity will also determine different degrees of prominence of the causer's strength in attempting to impose some activity on the causee. We will show that as complexity increases the causer's initiative strength i.e. the intention, will or energy imposing some change on the causee will also increase. In lack of efficient causation the causer's strength of volition will need to be elaborated (to the right of Scale 1). This is to be expected since periphrastic causative constructions codify more transparently the force-dynamics situation in which causer and causee are immersed.

Causative constructions are commonly described as involving two events a CAUSING EVENT and a CAUSED EVENT (Shibatani 1976). The causing event most commonly depicts the way the event is initiated while the caused event designates either the result or the performed action. As opposed to plain transitive constructions, causatives "involve the specification of an additional argument, a causer, onto a basic clause" (Dixon 2000:31). Following Langacker (1991), we assume that a crucial function of causative constructions is to underline the initiative capacity of the causer. Another fundamental function of causatives is to highlight the way in which the causee reacts to the causer's input.

In the simplest case of causation, the subject's initiation and the actual action are indistinguishable, thus a volitional agent exerts his initiative capacity to impose some change-of-state on a theme, generally through direct contact. A common phenomenon observed across languages is that causative markers derive transitive constructions from intransitive verb stems. Thus derived causatives and lexical causatives (plain transitive verbs) overlap in the most basic level of causation. The difference, however, is crucial, for derived causatives add a morpheme that underlines the presence of an additional initiator. Most causatives in Tarascan are morphological.

Transitive constructions are not common bases for causative events across languages; however, in Tarascan they are. We claim that the event complexity increases as a consequence of differentiating the causer's initiation from the causee's action. Causer and causee are thus immersed in a force-dynamics situation (Talmy 1988) where the causee resists in different degrees the driving force of the causer. Once initiation is there, Tarascan is flexible to induce actions with different strengths and to let intermediate inductors drive the event. We will defend the idea that as the causative event gains complexity it will tend to be seen as composed of two sep-

arate subevents. Elements occupying the left of scale 1 will lead to a simplex type of event; those to the right will be composed of two distinguishable subevents.

Since the way in which complexity shows up is determined by how the causer imposes some changing action, in Scale 2 we propose a hierarchy of inductive inputs according to which the event gains complexity:

DIRECT CONTACT > NEUTRAL INITIATION > COMPELLING INITIATION > VERBAL INITIATION > INITIATION BY SOME INTERMEDIATE MEANS.

Scale 2

The hierarchy depends of the notions of integration and distance. Elements to the left imply direct or close contact, while going down the scale, the distance between the causer's initiation and the causee's action is bigger. As distance increases the event will tend to be composed of two cuasi-independent events. We will try to show that Tarascan causatives are sensitive to these crucial factors.

Shibatani and Pardeshi (this volume) redefine prototypical *DIRECT CAUSATION* as a situation involving an agentive causer and a patientive causee and prototypical *INDIRECT CAUSATION* as a situation involving two agentive participants: one agentive causer and another agentive causee. Direct causation involves intransitive verbs whose subject is patientive, while indirect causation involves intransitive and transitive verbs whose subject is agentive. The gradual organization proposed in Scale 2 complements Shibatani and Pardeshi's fundamental contrast. Direct contact fully coincides with direct causation, however indirect causation is subject to further elaboration. We suggest that neutral > compelling > verbal > intermediate initiation constitute four common notions that may account not only for Tarascan indirect causatives but also for parallel phenomena in other languages of the world. Our exposition of the Tarascan causative system will show the validity of these notions.

This paper is organized as follows. Section 2 offers basic information regarding Tarascan morphosyntactic structure. Section 3 addresses the problem of synthetic causatives. Each causative marker is analyzed in a separate subsection. Section 4 is devoted to the study of periphrastic causatives. Causative verbs are presented according to their degree of grammaticization. Finally, Section 5 concludes with some theoretical considerations related to the structure of Tarascan causatives.

2. Basic structural information

Tarascan comprises a very elaborate derivational verbal system. Although bare stems exist, there is a very productive derivational system in which a basic stem can take derivative, voice, causative, locative, positional, directional and adverbial

suffixes. Most derivative forms are spatial-geometrical-configurational suffixes that are generally associated with body parts. Inflectional suffixes follow the stem to mark aspect, tense, mood and person. Stems are conveniently classified in two general groups: those not needing derivational morphemes – “free stems,” and those requiring a derivative suffix – “dependent stems”:

Free

p'uku-ni

fat-INF

- (4) *anhatapu p'uku-s-0-ti*
 tree fat-PERF-PRES-IND.3
 ‘The tree is big around’

Dependent

ura-pi-ni

white-INTR-INF

- (5) *takusi ura-pi-s-0-ti*
 cloth white-INTR-PERF-PRES-IND.3
 ‘The cloth is white’

The base form boundary is defined in terms of primary stress (Nava ms). The last vowel of the base, be it free or dependent, carries primary stress: [k'ú] ‘curved’ > [k'u-ntí] ‘bend’. Both free and dependent stems can also derive new verbs or change their basic valence adding derivational suffixes. The complex ways in which voice, transitive/causative and derivative markers interact in creating new verbal forms are beyond the scope of this paper.

There is subject/verb agreement based on person. *-ti* marks third person and *-ka* corresponds with first and second person:

SINGULAR

- (6) *Ji exe-s-0-ka wíchu-ni*
 I see-PERF-PRES-IND.1/2 dog-OB
 ‘I saw the dog’
- (7) *T'u exe-s-0-ka wíchu-ni*
 you see-PERF-PRES-IND.1/2 dog-OB
 ‘You saw the dog’
- (8) *Ima exe-s-0-ti wíchu-ni*
 he see-PERF-PRES-IND.3 dog-OB
 ‘He saw the dog’

PLURAL

- (9) *Jucha exe-s-0-ka wichu-ni*
 we see-PERF-PRES-IND.1/2 dog-OB
 'We saw the dog'
- (10) *Cha exe-s-0-ka wichu-ni*
 you all see-PERF-PRES-IND.1/2 dog-OB
 'You-all saw the dog'
- (11) *Ts'ima exe-s-0-ti wichu-ni*
 they see-PERF-PRES-IND.3 dog-OB
 'They saw the dog'

Word order in Tarascan is quite flexible. Villavicencio (ms) finds a 50% fluctuation between SOV and SVO in the XVIth Century and a non-significant dominance of SVO word order in current Tarascan. However, given the fact that tense, aspect and modal markers follow the verb and that there are postpositions, suffixes and case markers we assume that SOV is the prototype as in (12a). The fact the predominant causative system is morphological may also suggest that Tarascan is mainly SOV. The high number of SVO clauses may respond to a variety of discourse effects quite common in primary object languages. Primary objects, being human and animate, tend to occur next to the verb having more prominence than secondary objects. Human objects in Tarascan immediately precede or follow the verb (12a–b); however, the secondary object may be promoted next to the verb as in (12c):

- (12) a. *Valeria Yuyani-ni arhi-s-0-ti ma wantantskwa*
 Valeria Yuyani-OB tell-PERF-PRES-IND.3 a story
 'Valeria told Yuyani a story'
- b. *Valeria arhi-s-0-ti Yuyani-ni ma wantantskwa*
 Valeria tell-PERF-PRES-IND.3 Yuyani-OB a story
 'Valeria told Yuyani a story'
- c. *Valeria arhi-s-0-ti ma wantantskwa Yuyani-ni*
 Valeria tell-PERF-PRES-IND.3 a story Yuyani-OB
 'Valeria told Yuyani a story'

The specific contrast between (12a) and (12b) is beyond the scope of this paper. What is crucial is that the two objects (*wantantskwa* and *Yuyani*) gain prominence as they occur next to the verb.

Subjects are unmarked for case. Objects are marked with the generic object suffix *-ni* which is in fact a marker of non-subjecthood.² Human and definite non-human objects take the suffix *-ni* (13), while indefinite non-human objects are unmarked as in (14):

- (13) *Eratzini iwi-ra-s-0-ti* *chkári-ni Adrianu-ni*
 Eratzin chop-CAUS-PERF-PRES-IND.3 wood-OB Adrian-OB
 ‘Eratzin made Adrian chop the log’
- (14) *Valeria arhi-s-0-ti* *ma wantantskwa Yuyani-ni*
 Valeria tell-PERF-PRES-IND.3 a story Yuyani-OB
 ‘Valeria told Yuyani a story’

Plural nouns are higher in the definite scale; thus they take the object suffix *-ni*:

- (15) *Valeria arhi-a-s-0-ti* *wantantskwe-echa-ni Yuyani-ni*
 Valeria tell-PL.OBJ-PERF-PRES-IND.3 story-PL-OB Yuyani-OB
 ‘Valeria told the stories to Yuyani’

The suffix *-ni* marks all argumental objects. An analysis in terms of direct/indirect distinction is rather inconsistent for there is considerable overlap between direct and indirect objects (see Capistran ms, and Chamoreau, 1999 for detailed analyses of *-ni* objects). Although independent research is required to clearly distinguish different object types, passive formation constitutes an argument to suggest that Tarascan is a language of Primary Object: dative experiencers outrank thematic, or patient objects.³ Primary objects can passivize (16b), while secondary objects cannot (16c):

- (16) a. *Adrianu intsikurhi-s-0-ti* *ma karakata Valeria-ni*
 Adrian give-PERF-PRES-IND.3 a written thing Valeria-OB
 ‘Adrian gave Valeria a book’
- b. *Valeria intsikurhi-nha-s-0-ti* *ma karakata Adrianu-ni*
 Adrian give-PASS-PERF-PRES-IND.3 a written thing Adrian-OB
jimpo
 by
 ‘Valeria was given a book by Adrian’
- c. **Ma karakata intsikurhi-nha-s-0-ti* *Valeria Adrianu-ni*
 A written thing give-PASS-PERF-PRES-IND.3 Valeria Adrian-OB
jimpo
 by
 ‘A book was given to Valeria by Adrian’

The same asymmetry is found with inalienable possession. While human datives can always passivize (17b), possessed inalienable thematic objects cannot (17c):

- (17) a. *Yuyani Eratzini-ni mó-rhi-ta-s-0-ti*
 Yuyani Eratzin-OB change-MDL-CAUS-PERF-PRES-IND.3
xukuparhakwa-ni
 clothes-OB
 ‘Yuyani changed Eratzin’s clothes’ (‘got him dressed’)

- b. *Eratzini xukuparhakwa-ni*
 Eratzin clothes-OB
mó-rhi-ta-nha-s-0-ti *Yuyani-ni jimbo*
 change-MDL-CAUS-PASS-PERF-PRES-IND.3 Yuyani-OB by
 ‘Eratzin was changed of clothing by Yuyani’
- c. **Xukuparhakwa Eratzin-ni*
 clothes Eratzin-OB
mó-rhi-ta-nha-s-0-ti *Yuyani-ni jimbo*
 change-MDL-CAUS-PASS-PERF-PRES-IND.3 Yuy-OB by
 ‘The clothes were changed to Eratzin by Yuyani’

As is generally the case for this type of languages, datives outrank patientive themes when selected for object. Thus dative objects appear next to the verb either pre or postverbally outranking thematic objects. The preverbal position of *Eratzini* in (17a) gives him primary status. The data in (16) and (17) suggest the existence of primary and secondary *-ni* marked objects. Since thematic objects have more restrictions than datives, the choice for topicality can be accounted for by Givón’s (1984) empathy hierarchy: AG > DAT > PAT > OTHER. Although further argumentation is needed to clearly define the status of secondary objects in Tarascan, the salient status of the dative is sound.

3. Synthetic causatives

Tarascan causatives involve a wide range of causative situations. In their most basic manifestation, causatives overlap with plain transitive constructions. The difference between them is that causatives augment the valence structure of the base form by introducing the causer (Dixon 2000).

We will assume that causatives involve a wide range of constructions that are normally divided in two main groups: direct and indirect causatives. In plain transitive as well as direct causative constructions the subject directly imposes some change in the object. In its most typical representation, the subject is a volitional AGENT, while the object is a non-conscious PATIENT/THEME. Indirect causative constructions involve some activity being induced by a CAUSER to a CAUSEE. As already claimed in the introduction, the main contrast between direct and indirect causative constructions is that in indirect ones the change of state undergone by the causee is due to his control.

The degree of participation/involvement of the causee varies depending on two main factors: a) the lexical properties of the caused verb and b) the degree of independence with which the two actions composing the complex causative event are construed. Synthetic causatives in Tarascan can express either direct or indirect

causation depending on the lexical properties of the verb. As the verb gains activity and agentivity, causation will involve a more complex representation where causer and causee tend to act separately. Analytic causatives always convey indirect causation as the periphrastic construction responds to the necessity of letting both the initiation and the concrete caused action compete for primary status. We will claim that as the complexity of the event increases, the independence of the causee also augments.

The order of exposition will follow the contents of Scale 1. We will start with basic direct causation and aim for more complex causal relationships with higher degree of event independence.

3.1 *-ku*

Of all causative markers *-ku* is the most basic one. It is the direct causation marker *par excellence*. Although *-ku* can take free stems (18), in most cases it marks dependent stems. Examples (19a) and (20a) are ungrammatical without *-ku* or some other causative marker, as can be seen from the (19b) and (20b) samples:

- (18) a. *Anhatapu k'unti-s-0-ti*
 tree bend-PERF-PRES-IND.3
 'The tree is bent to one side'
- b. *Adrianu k'unti-ku -s-0-ti anhatapu-ni*
 Adrian bend-CAUS-PERF-PRES-IND.3 tree-OB
 'Adrian bent the tree'
- (19) a. *Adrianu tskí-ku-s-0-ti misitu-ni*
 Adrian skwis-CAUS-PERF-PRES-IND.3 cat-OB
 'Adrian squeezed the cat'
- b. **Adrianu tskí-s-0-ti misitu-ni*
- (20) a. *Valeria kurhu-ku-s-0-ti chkári-ni*
 Valeria burn-CAUS-PERF-PRES-IND.3 wood-OB
 'Valeria has burned the tip of the stick'
- b. **Valeria kurhu-s-0-ti chkári-ni*

The dependent stems that take *-ku* are commonly marked by a spatial-locative suffix. In the most basic situation *-ku* simply introduces a new participant in a location. Notice that *-ta* encodes the more energetic causative reading (see the Section 3.3):

- (21) a. *tasambani p'era-ndi-ku-s-0-ti*
 tile long/tilted-corner-CAUS-PERF-PRES-IND.3
 'The tile is leaning on the corner'

- b. *Adrianu tasambani-ni p'era-ndi-ta-s-0-ti*
 Adrian tile-OB long/tilted-corner-CAUS-PERF-PRES-IND.3
 'Adrian leaned the tile on the corner'

In its prototypical causative form *-ku* introduces an agentive participant, a causer, having direct contact with the patient (18b, 19a, 20a).⁴ In most cases *-ku* derives a causative construction from an intransitive or a middle verb with a simple undifferentiated subject self-inducing some change-of-state. These are cases of whole/part relationship where the body part constitutes the locative specification within the whole. Grooming verbs are typical examples of that situation. In the examples in (a) the action is self-oriented, in (b) *-ku* introduces a new agent/causer making the original subject a patient/theme:

- (22) a. *Valeria ampa-ts'i-s-0-ti*
 Valeria clean-head-PERF-PRES-IND.3
 'Valeria brushed her hair'
- b. *Eratzini ampa-ts'i-ku-s-0-ti* *Valeria-ni*
 Eratzin clean-head-CAUS-PERF-PRES-IND.3 Valeria-OB
 'Eratzin brushed Valeria's hair'
- (23) a. *Yuyani kutsu-mu-s-0-ti*
 Yuyani wipe-mouth-PERF-PRES-IND.3
 'Yuyani wiped her mouth'
- b. *Adrianu kutsu-mu-ku-s-0-ti* *Yuyani-ni*
 Adrian wipe-mouth-CAUS-PERF-PRES-IND.3 Yuyani-OB
 'Adrian wiped Yuyani's mouth'

Introducing the causer, *-ku* also transforms states into change of state verbs. The following examples involve a change of physical configuration. The change of the middle marker *-tsi-* to *-s-* is due to morphophonemic reasons:

- (24) a. *Eratzini yurhu-tsi-s-0-ti*
 Eratzin drip-down.MDL-PERF-PRES-IND.3
 'Eratzin is slender'
- b. *Wantanhiata yurhu-s-ku-s-0-ti* *Eratzini-ni*
 sorrow drip-down.MDL-CAUS-PERF-PRES-IND.3 Eratzin-OB
 'Sorrow made Eratzin skinny'

Being at the lowest part of the causation scale, the causee is consistently non-volitional and non-agentive. More than acting the causee simply reacts as determined by the causer's input. Notice from (25b, 26b) that the causee's actions are not volitional or highly controlled:

- (25) a. *Adrianu ata-nharhi-nt'a-s-0-ti* *jóskwa-nhi*
 Adrian paint-face-IT-PERF-PRES-IND.3 star-OB
 'Adrian painted the star on his face'
- b. *Adrianu Eratsini-ni ata-nharhi-ku-nt'a-s-0-ti*
 Adrian Eratsin-OB paint-face-CAUS-IT-PERF-PRES-IND.3
jóskwa-nhi
 star-OB
 'Adrian painted the star on Eratsin's face'
- (26) a. *Adrianu arha-cha-s-0-ti*
 Adrian open-mouth-PERF-PRES-IND.3
 'Adrian's mouth is open/opened his mouth'
- b. *Yuyani arha-cha-ku-s-0-ti* *Adrianu-ni*
 Yuyani open-mouth-CAUS-PERF-PRES-IND.3 Adrian-OB
 'Yuyani opened Adrian's mouth'

The behavior of *-ku* as a causative marker fully coincides with the function of a direct causative marker. As we will show below, the lack of causee's volition and control depicted by *-ku* is in contrast with other more energetic Tarascan causative markers.

3.2 *-ra*

As opposed to *-ku*, *-ra* involves a higher degree of causation entering thus the domain of indirect causation. The causer's initiation and the causee's activity and volition are more transparent. While there are cases in which *-ra* produces a plain direct causative construction, in the vast majority of cases *-ra* introduces a causer that makes the causee perform some action. There are two classes of stems that *-ra* typically takes: a) a large class of free stems and b) a smaller class of intransitive verbs, mostly dependent, derived from adjective-like stems that designate attributes and properties. In lack of clear arguments to define adjectives in Tarascan we will call these "*attributive dependent stems*." Attributive dependent stems can take the predicative suffixes *-pi-*, *-ki-*, *-nhi-*, *-mi-* to become inchoative verbs. As can be seen in (27a), the stem *ura* 'white' plus the verbal suffix *-pi* derive the intransitive verb "to become white." This verb is in turn subject to causative formation with *-ra*. As can be seen from (27b), a causative construction whose base is an inchoative verb designates a change-of-state where the thematic object is simply a patient. We are still in the realm of direct causation:

- (27) a. *takusī ura-pi-s-0-ti*
 cloth white-PRED-PERF-PRES-IND.3
 'The cloth is/has become white'

- b. *Valeria ura-pe-ra-s-0-ti takusi-ni*
 Valeria white-PRED-CAUS-PRES-IND.3 cloth-OB
 ‘Valeria whitened the cloth’

A parallel situation takes place with free inchoative verbs. The thematic subject of the intransitive clause becomes the thematic object of the causative construction. Depending on the degree of activity of the thematic object in the transitive construction, the event can be interpreted as direct or as indirect causative. In growing (28.b), the object *anhatapu* ‘tree’ is not yet an active causee:

- (28) a. *anhatapu p’uku-s-0-ti*
 tree fat-PERF-PRES-IND.3
 ‘The tree is big around’
 b. *terenta p’uku-ra-s-0-ti anhatapu-ni*
 manure fat-CAUS-PERF-PRES-IND.3 tree-OB
 ‘The manure made the tree (grow) big’

However an active subject with *-ra* will make a pristine indirect causative construction. In these cases the causer initiates the event that the causee actually develops:

- (29) a. *Fernando kawi-s-0-ti*
 Fernando drink-PERF-PRES-IND.3
 ‘Fernando got drunk’
 b. *Ricardu Fernando-ni kawi-ra-s-0-ti*
 Ricardo Fernando-OB drink-CAUS-PERF-PRES-IND.3
 ‘Ricardo got Fernando drunk’

Example (29b) can actually take an ambiguous volitional/non-volitional reading, for Fernando can either be forced, induced or simply invited to drink. We can think of these as borderline cases were the causee’s independence starts to emerge. As can be predicted, transitive verbs will undoubtedly derive indirect causative constructions. Examples (30b) and (31b) are eloquent to this respect:

- (30) a. *Yuyani urhu-s-0-ti tsíri-ni*
 Yuyani grind-PERF-PRES-IND.3 corn-OB
 ‘Yuyani ground the corn’
 b. *Valeria urhu-ra-s-0-ti tsíri-ni Yuyani-ni*
 Valeria grind-CAUS-PERF-PRES-IND.3 corn-OB Yuyani-OB
 ‘Valeria made Yuyani grind the corn’
 (31) a. *Adrianu iwi-s-0-ti chkári-ni*
 Adrian chop-PERF-PRES-IND.3 wood-OB
 ‘Adrian chopped wood’

- b. *Eratzini iwi-ra-s-0-ti* *chkári-ni Adrianu-ni*
 Eratin chop-CAUS-PERF-PRES-IND.3 wood-OB Adrian-OB
 ‘Eratzin made Adrian chop wood’

Given that in Tarascan all objects are marked for *-ni*, in the causative construction (30b) and (31b) there are two potential causees. Givón’s (1988) empathy hierarchy: AG > DAT > PAT > OTHER accounts for the fact that datives outrank patients to be chosen as primary object causees. Givón’s hierarchy is fully compatible with Langacker’s (1991) role archetype model by which datives are active participants in the target domain while patients are consistently non-active in that same domain. For indirect causative constructions, the development of the event is divided between the initiative capacity of the causer and the actual performance of the causee. Thus the dative participant is naturally chosen as the second most active and most prominent participant. Ditransitive verbs are no exception for the active causee condition: *-ra* imports a new causer letting the original subject become the causee, as the (b) examples show:

- (32) a. *Valeria arhi-s-0-ti* *ma wantantskwa Yuyani-ni*
 Valeria tell-PERF-PRES-IND.3 a story Yuyani-OB
 ‘Valeria told Yuyani a story’
- b. *Ricardu arhi-ra-s-0-ti* *ma wantantskwa Valeria-ni*
 Ricardo tell-CAUS-PERF-PRES-IND.3 a story Valeria-OB
Yuyani-ni
 Yuyani-OB
 ‘Ricardo made Valeria tell Yuyani a story’
- (33) a. *Eratzini ewa-s-0-ti* *ma kwaxanta tsíkata-ni*
 Eratzin take-PERF-PRES-IND.3 an egg chicken-OB
 ‘Eratzin took an egg from the chicken’
- b. *Ricardu ewa-ra-s-0-ti* *Adrianu-ni ma kwaxanta*
 Ricardo take-CAUS-PERF-PRES-IND.3 Adrian-OB an egg
tsíkata-ni
 chicken-OB
 ‘Ricardo made Adrian take an egg from the chicken’

These facts confirm the generalization that causative formation will always take as the causee the most active participant, after the main subject.

In Tarascan, as in most languages of the world, initiation increases as direct transitive contact decreases. We have shown that *-ku* tends to derive transitive change-of-state direct causative events resulting from the direct contact that the agent imposes on the patient. In contrast, *-ra*, while being able to designate direct causative events, tends to introduce a causer inducing the causee to perform some action. The general contrast between *-ku* and *-ra* is exploited in Tarascan to es-

establish fine grain distinctions in verbs that can take both markers. An example in point is the verb *wisī* ‘crawl/drag’: with *-ku* in (34b), the patient is actually dragged by the agent, however using *-ra*, in (34c), the causer simply induces the causee to crawl by himself:

- (34) a. *Yuyani wisī-s-0-ti*
 Yuyani drag-PERF-PRES-IND.3
 ‘Yuyani crawling (in the dirt/floor)’
- b. *Adrianu wisī-ku-s-0-ti* *Yuyani-ni*
 Adrian drag-CAUS-PERF-PRES-IND.3 Yuyani-OB
 ‘Adrian dragged Yuyani’
- c. *Adrianu wisī-ra-s-0-ti* *Yuyani-ni*
 Adrian drag-CAUS-PERF-PRES-IND.3 Yuyani-OB
 ‘Adrian made Yuyani drag herself on the floor’

Event complexity increases as the causee gain’s independence. Also the causer’s initiative action is more prominent as direct contact is no longer present. As we will see, the causer’s initiative capacity will also increase as the event gains complexity. Causatives with *-ta* will illustrate this fact.

3.3 *-ta*

As opposed to *-ra*, which is specialized for unmarked verbal and derived adjective-like stems, *-ta* marks dependent stems or stems marked for a formative or a derivative marker. As a causative marker, *-ta* contrasts with middle markers, typically *-ra*.⁵ Most derivative forms are old body-part particles that have grammaticized as middle voice and positional markers. Thus *-ta* derives causative constructions from middle ones. In most cases, causation is strong and direct mirroring transitive constructions. Yet, depending on the degree of activity of the subject, *-ta* also marks causative events. Given the vast complexity of the locative/positional system in Tarascan (Foster 1969; Friedrich 1970, 1971; Monzón 1998), there is a considerable number of verb + middle marker combinations that *-ku* and *-ta* can take. While *-ku* marks parts of animate objects, *-ta* depicts changes of location/position of different types of objects. The following are transparent examples of change of location with causative *-ta*:

- (35) a. *tsúntsu kira-nu-s-0-ti*
 pot round-patio-PERF-PRES-IND.3
 ‘The pot is in the patio’
- b. *Eratzini tsúntsu-ni kira-nu-ta-s-0-ti*
 Eratzin pot-OB round-patio-CAUS-PERF-PRES-IND.3
 ‘Eratzin put the pot in the patio’

- (36) a. *Yuyani mó-rhi-s-0-ti* *watsotakwa-rhu*
 Yuyani change-MDL-PERF-PRES-IND.3 fence-LOC
 ‘Yuyani went over the fence’
- b. *Yuyani Eratzini-ni mó-rhi-ta-s-0-ti*
 Yuyani Eratzin-OB change-MDL-CAUS-PERF-PRES-IND.3
watsotakwa-rhu
 fence-LOC
 ‘Yuyani passed Eratzin to the other side of the fence’

We showed in (19), (22), (23) that *-ku* marks parts conceptualized as locations within a whole. In contrast the location depicted by *-ta* is less focal. It marks whole locative units (37) or the including part in a part/whole relationship (38):

- (37) *Eratzini ampa-ts’i-ta-s-0-ti* *kéts’itakwa-ni*
 Eratzin clean-head-CAUS-PERF-PRES-IND.3 board-OB
 ‘Eratzin cleaned the altar’
- (38) *Adrianu kutsu-mu-ta-s-0-ti* *míkwa-ni*
 Adrián wipe-mouth-CAUS-PERF-PRES-IND.3 door-OB
 ‘Adrián cleaned the door frame’

Let us now observe the causee’s degree of agency. As has been the case for *-ra*, as soon as some initiative capacity can be depicted from the subject of the verb, the use of *-ta* makes the event an inductive indirect causative. There are, of course, cases of ambiguity where the transitive direct causative and the indirect causative interpretation coexist, (see 39b and 40b). Typical cases of split interpretation are verbs of change of position and of non-translational motion. The subjects of these verbs need not actually perform the action designated by the verb:

- (39) a. *Valeria mana-ra-s-0-ti*
 Valeria tremble-MDL-PERF-PRES-IND.3
 ‘Valeria is trembling’
- b. *Adrianu Valeria-ni mana-ta-s-0-ti*
 Adrian Valeria-OB tremble-CAUS-PERF-PRES-IND.3
 ‘Adrian shook Valeria/Adrian made Valeria tremble’
- (40) a. *Adrianu waxa-ka-s-0-ti*
 Adrian sit-MDL-PERF-PRES-IND.3
 ‘Adrian is sitting’
- b. *Eratzini Adrianu-ni waxa-ta-s-0-ti*
 Eratzin Adrian-OB sit-CAUS-PERF-PRES-IND.3
 ‘Eratzin sat Adrian down/Eratzin made Adrian sit down’

However in cases where the verb designates agentive motion, mostly traslational, *-ta* can only signal inductive indirect causation:

- (41) a. *Adrian xana-ra-s-0-ti*
 Adrian walk-MDL-PERF-PRES-IND.3
 ‘Adrian walked’
 b. *Eratzinini Adrianu-ni xana-ta-s-0-ti*
 Eratzin Adrian-CAUS walk-CAUS-PERF-PRES-IND.3
 ‘Eratzin made Adrian walk’

This behavior is coherent with our characterization. In verbs that designate change-of-position (sitting down, standing up, etc.) the movement is generally a non-conscious part of a routine, while verbs of motion imply volition, energy exertion and control. Change-of-position causatives belong to direct causation, while motion verbs in causative constructions fall in indirect causation territory.

The activity for indirect causation needs not be physical. Mental verbs follow the same pattern. The verb *jorhena* ‘know’ becomes the causative verb “make someone know/learn” as in (42b):

- (42) a. *Pánfilu jorhena-s-0-ti*
 Pánfilo know-PERF-PRES-IND.3
 ‘Pánfilo knows (a lot)’
 b. *Pánfilu Ricardu-ni jorhen-ta-s-0-ti* *pire-ni*
 Pánfilo Ricardo-OB saber-CAUS-PERF-PRES-IND.3 sing-INF
 ‘Pánfilo has taught Ricardo to sing (making him know how to sing)’

In Scale 1 we suggested that *-ra* and *-ta* outrank *-ku* in degree of initiative strength of causation. Cases of *-ra* dominating *-ku* have already been pointed out (see examples in (34)). More interesting are verbs that can take the three morphemes. The contrast between them is a manifestation that *-ku* is *prima facie* a basic level causative, parallel to a transitive marker. In this three-way contrast *-ku* not only marks a causative event but also selects a specific part of a whole unit. On the other hand *-ra* and *-ta* take the whole participant and designate less direct kinds of causation. Based on the intransitive verb *cháni* “submerge” in (43a), the causative markers in examples (43b–d) depict different kinds of transitivity that we present in a decreasing order: *-ku* in (43b) signals that the fish was stabbed through from one side to the other; *-ra*, in (43c) simply states the fact that the fish was caught, while *-ta* in (43d) designates causation with reference to some locative goal, in this case the fish was nailed to the wall:

- (43) a. *kúchi chá-s-0-ti* *atsimu-rhu*
 pig penetrate-PERF-PRES-IND.3 mud-LOC
 ‘The pig got stuck in the mud’

- b. *Adrianu kurucha-ni chá-ku-s-0-ti*
 Adrian fish-OB penetrate-CAUS-PERF-PRES-IND.3
 ‘Adrian stabbed the fish (from one side to the other)’
- c. *ji kurucha-ni chá-ra-s-0-ka*
 I fish-OB penetrate-CAUS-PERF-PRES-IND.1
 ‘I hooked the fish’
- d. *Eratzini kurucha-ni chá-ta-s-0-ti*
 Eratzin fish-OB penetrate-CAUS-PERF-PRES-IND.3
 (*tsintsikata-rhu*)
 (wall-LOC)
 ‘Eratzin nailed the fish (to the wall)’

There is a very strong correlation between transitivity and location in Tarascan (Monzón 1999). In traditional descriptions, *-ta* is glossed either as a transitive or as a locative marker. There are in fact two *-ta* markers that can co-occur. The first one is a strict locative that alternates with *-nhari* ‘face’ and a whole list of body part morphemes accomplishing a locative function. The second one is a causative-locative marker where the change of state is in fact a change of location of a (whole) participant. The reference point of motion is either the source or the goal of a path. In (43d), the reference point is the goal, while in (44b) it is the source:

- (44) a. *Adrianu arhu-ku-s-0-ti* *t’atsini-ni*
 Adrian divide-CAUS-PERF -PRES-IND.3 beans-OB
 ‘Adrian divided the beans (among the people)’
- b. *Yuyani arhu-ta-s-0-ti* *t’atsini-ni*
 Yuyani divide-LOC-PERF-PRES-IND.3 beans-OB
 ‘Yuyani removed the beans (from the pot)’

For *-ta*, the causative meaning is as nuclear as the locative information. What *-ta* depicts are whole units being displaced. With respect to the whole/part contrast *-ku* signals that the unit is divided into one or more parts, while *-ta* designates that the unit is being removed from a locative source. An example of this contrast can be seen from the verb *kachu* ‘break/cut’. In both examples the line is cut, however only in (45b) *-ta* depicts that the line is cut with respect to a reference point:

- (45) a. *Adrianu kachu-ku-s-0-ti* *sintari-ni*
 Adrian break/long-CAUS-PERF-PRES-IND.3 line-OB
 ‘Adrian cut the line (i.e. in half with a knife)’
- b. *Yuyani kachu-ta-s-0-ti* *sintari-ni*
 Yuyani break/long-LOC-PERF-PRES-IND.3 line-OB
 ‘Yuyani cut the line (from the pole to which it was tied up to)’

Now, regarding the object status of the causee, two arguments support the idea that in the *-ta* causative construction the dative participant is in fact the primary object.

First, reflexives in Tarascan are formed when subject and object are correferential. The fact the reflexive *-kurhi* commutes with *-ta* attests for its status as primary object:

- (46) a. *Yuyani Eratzini-ni mo-rhi-ta-s-0-ti*
 Yuyani Eratzin-OB change-MDL-CAUS-PERF-PRES-IND.3
xukuparhakwa-ni
 clothes-OB
 ‘Yuyani changed Eratzin’s clothes’
- b. *Yuyani xukuparhakwa-ni mo-rhi-kurhi-s-0-ti*
 Yuyani clothes-OB change-MDL-REFLX-PERF-PRES-IND.3
 ‘Yuyani changed her clothes’

Second, dative primary objects in a *-ta* construction can become the subject of a passive causative:

- (47) *Eratzini xukuparhakwa-ni mo-rhi-ta-nha-s-0-ti*
 Eratzin clothes-OB change-MDL-CAUS-PASS-PERF-PRES-IND.3
Yuyani-ni jimpo
 Yuyani-OB BY
 ‘Eratzin was changed of clothing by Yuyani’

The contrast being highlighted here has important causative reflexes. Since causation can designate the division of an event in two parts – an inductive and a performing part – we suggest that one of the meanings that the causative marker will underline is the causer’s volitional initiation. If *-ta* is a stronger causative than *-ku*, then *-ta* causatives should strongly stress the causer’s intentions. This seems to be the case. The following examples show a crucial dynamicity increase. In (48a) *-ntu* is a middle stative marker which combines with *-ku* (48b) to depict a change imposed by direct contact. *-Ta* also designates direct contact in (48c); however, the situation is no longer stative. There is a higher degree of causer participation and effort which reflects some resistance from *Tachita*:

- (48) a. *Adrianu aparhi-ntu-s-0-ti*
 Adrian burn-foot-PERF-PRES-IND.3
 ‘Adrian burned his foot’
- b. *Yuyani Adrianu-ni aparhi-ntu-ku-s-0-ti*
 Yuyani Adrian-OB burn-foot-CAUS-PERF-PRES-IND.3
 ‘Yuyani burned Adrian’s foot’
- c. *Yuyani Tachita-ni aparhi-ta-s-0-ti*
 Yuyani Tachita-OB burn-CAUS-PERF-PRES-IND.3
 ‘Yuyani burned Tachita’

Notice also that *-ku* can designate causation taking as its base a middle situation, while *-ta* precludes the middle form *-ntu* and imposes a dynamic reading which presupposes a major degree of volitional control. We suggest that stressed volitional control takes *-ta*; while plain routine or uncontrolled actions are coded with *-ku*. This intuition is in fact borne out as can be seen from the following contrastive samples, where *-ta* highlights the subject's volitional will:

- (49) a. *Valeria umi-rhu-ku-s-0-ti* *chpíri-ni*
 Valeria suffocate-top-CAUS-PERF-PRES-IND.3 fire-OB
 'Valeria suffocated the fire (unintentionally, by dripping or splashing water all over)'
- b. *Valeria umi-rhu-ta-s-0-ti* *chpíri-ni*
 Valeria suffocate-top-CAUS-PERF-PRES-IND.3 fire-OB
 'Valeria suffocated the fire (intentionally, by poring water on the fire)'

Further examples showing that *-ku* marks low degree of subject control, while *-ta* intensifies the causer's intention can be seen from the stem *t'wa* 'to spit'. The locative *-rhi-* marks the goal. Adding *-ta* in (50b), the subject controls the direction of his spitting:

- (50) a. *Eratzini t'wá-ta-s-0-ti*
 Eratzin spit-CAUS-PERF-PRES-IND.3
 'Eratzin spited'
- b. *Eratzini misitu-ni t'wá-rhi-s-0-ti*
 Eratzin cat-OB spit-LOC-PERF-PRES-IND.3
 'Eratzin spited towards the cat'
- c. *Eratzini misitu-ni t'wá-rhi-ta-s-0-ti*
 Eratzin cat-OB spit-LOC-CAUS-PERF-PRES-IND.3
 'Eratzin spited aiming at the cat'

Here is one more example. In contrast with *-rhi*, the locative affix *-narhi* depicts a more specific goal. Again *-ta* designates that the subject controls the direction of his spitting, as can be seen from the contrast between (51a) and (51b):

- (51) a. *Eratzini misitu-ni t'wá-narhi-ku-s-0-ti*
 Eratzin cat-OB spit-face-CAUS-PERF-PRES-IND.3
 'Eratzin spitted the cat's face'
- b. *Eratzini misitu-ni t'wá-narhi-ta-s-0-ti*
 Eratzin cat-OB spit-face-CAUS-PERF-PRES-IND.3
 'Eratzin spitted the cat's face aiming at it'

Although the Tarascan locative system is far more complex than we have been able to show here, this data attest for the causative-locative status of *-ta*. We

have also showed in the *-ku* > *-ra* > *-ta* continuum that the initiative capacity of the causer increases. While *-ku* is restricted to routine or automatic actions, *-ra*, *-ta* involve a higher degree of elaboration of the causer's involvement. Of these two markers, *-ta* is the default marker to stress the causer's volition. As could be seen from the contrasting examples in (43), *-ra* implies simple contact while *-ta* also involves directionality and underlined volition/control. We hypothesize that the volitional strength of *-ta* is strongly associated with its goal meaning. Actions oriented to a locative goal require a higher degree of subject control/involvement. This well-established pattern across languages can easily be extended to cases where the location gets secondary status and volition becomes most prominent.

The causative markers *-ma*, *-nha* and *-pa* follow *-ta*'s behavior. They designate different types of location: *-ma* 'water, liquid', *-nha* 'cavity' and *-pa* 'ground, fire'. We will not elaborate on the nuances of the locative system.

The causative markers so far seen specialize in different types of causation: *-ku* is mostly devoted to direct causation while *-ra*, *-ta* mark both direct and indirect causation. Moreover, *-ra* and *-ta* depict different types of indirect causation. It should be stressed that, although indirect, the causation designated by *-ra* and *-ta* imply a close causative relationship. We will see in the next section that the core area of indirect causation is taken over by the causative suffix *-tara*.

3.4 *-tara*

The *bona fide* indirect causative marker is *-tara*. It designates unquestionable causation with no transitive direct contact overlapping. It may be obvious to point out that *-tara* is iconically motivated: it is the sum of two more basic causative markers: *-ta* and *-ra*. As we shall see, the morphological complexity of *-tara* reflects the conceptual complexity of the event type it designates.

Let us first outline its most basic structural properties. No bear stem can be marked for *-tara*, instead it requires the presence of a simple derivative form (see the causative marker in (59b)) or a more basic causative marker (52b). In the examples in (a) the lack of a basic causative marker makes an illegal output. The grammatical forms are given in (b):

- (52) a. **Urhu-tara-ni*
 grind-CAUS-INF
 'Make someone grind something'
- b. *Urhu-ra-tara-ni*
 grind-CAUS-CAUS-INF
 'Have X make Y grind something'

- (53) a. **Yuyani arhu-tara-s-0-ti* *t'atsini-ni Adrianu-ni*
 Yuyani divide-CAUS-PERF-PRES-IND.3 beans-OB Adrian-OB
 'Yuyani made Adrian remove the beans (from the pot)'
 b. *Yuyani arhu-ta-tara-s-0-ti* *t'atsini-ni Adrianu-ni*
 Yuyani divide-CAUS-CAUS-PERF-PRES-IND.3 beans-OB Adrian-OB
 'Yuyani made Adrian remove the beans (from the pot)'

As already pointed out (see Section 2), word order is somewhat flexible in Tarascan, SOV being tentatively considered as the canonical structure. In the *-tara* causative construction, while there is still some flexibility, the preferred word order is one in which the causer is sentence initial and the causee is postverbal. For emphatic purposes, the causee may be sentence final.⁶ If the base verb to which the *-tara* causative applies is transitive, the causee immediately follows the verb, as can be seen from (54a–b). If the base form is a ditransitive verb, the main condition is that the causee must always antecede the recipient dative. Thus, the thematic element can follow the verb, as is the case for (55):

- (54) a. *Eratzini arhu-ku-tara-s-0-ti* *Adiranu-ni t'atsini-ni*
 Eratzin divide-CAUS-CAUS-PERF-PRES-IND.3 Adrian-OB beans-OB
 'Eratzin made Adrian divide the beans'
 b. *Ricardu itsu-ta-tara-s-0-ti* *Fernandu-ni*
 Ricardo smoke-CAUS-CAUS-PERF-PRES-IND.3 Fernando-OB
ma sigarru
 a cigarette
 'Ricardo made Fernando smoke a cigarette'
- (55) *Eratzini kw'ani-ra-tara-s-0-ti* *ma tsakapu Valeria-ni*
 Eratzin throw-CAUS-CAUS-PERF-PRES-IND.3 a stone Valeria-OB
Yuyani-ni
 Yuyani-OB
 'Eratzin made Valeria throw a stone at Yuyani'

As already pointed out, the causee is consistently the primary object, i.e. it is the second most prominent participant in the causative clause. Not only is it marked for *-ni* as all Tarascan human objects are, but also, given its degree of salience, it can be the passive subject of a causative *-tara* construction. Example (56b) is the passive counterpart of the transitive causative in (56a):

- (56) a. *Adrianu hawa-ta-tara-s-0-ti* *Yuyani-ni Valeria-ni*
 Adrian lift-CAUS-CAUS-PERF-PRES-IND.3 Yuyani-OB Valeria-OB
 'Adrian made Yuyani lift Valeria up'

- b. *Yuyani hawa-ta-tara-nha-s-0-ti* *Valeria-ni*
 Yuyani lift-CAUS-CAUS-PASS-PERF-PRES-IND.3 Valeria-OB
Adrianu-ni jimpo
 Adrian-OBL by
 ‘Yuyani was forced to lift Valeria up by Adrian’

3.4.1 *Semantic composition*

We have already pointed out that *-tara* is composed of two basic causatives *-ta* and *-ra*. We now emphasize, following Friedrich (1984), that the composite causative marker also functions as – and most probably develops historically from – an instrumental marker. Instrumentals can be seen as non-active extensions of the subject as instruments transmit the subject’s energy to some other participant (Langacker 1991). Thus the *-tara* instrumental phrase inherits the inductive properties of the subject, as is the case for (57).

- (57) *Yuyani hawa-ra-tara-s-0-ti* *i bastoni*
 Yuyani stand-MDL-INSTR-PERF-PRES-IND.3 this cane
 ‘Yuyani stood up by means of that cane’

More interesting is the fact that Tarascan has two ways of marking instruments. In fact example (57) is the marked form to stress that the subject intentionally selected some instrument and actually made explicit use of it. Notice that the instrument is not oblique. We hypothesize that the instrument has been promoted to primary object in order to stress the subject’s volition.⁷ Everyday routine actions are coded by oblique instruments. Example (58) represents the prototypical oblique instrumental phrase where the noun phrase is marked by the postposition *jimpo*:

- (58) *Yuyani hawa-ra-s-0-ti* *i-ni bastoni-ni jimpo*
 Yuyani stand-MDL-PERF-PRES-IND.3 this-OB cane-OB-with
 ‘Yuyani stood with that cane’

The promotion analysis of a *-tara* instrument suggests the existence of a causative template in which the initiative capacity of the subject will consistently be highlighted. Thus in the causative construction, the causer’s initiative capacity will be most salient. As has been true for previous cases of clear indirect causation, *-tara* introduces an extra participant (the causer) letting the actual performer of the action (the causee) function as the second most prominent participant, i.e. the object. The causee thus operates as an extension from the inductive capacity of the causer. Instruments marked for *-tara* are accounted for by the same analysis as extensions of the agent.

The degree of complexity of the causative event depends on how elaborated is the basic causative structure to which *-tara* applies. Recall that *-tara* cannot apply to intransitive bare stems, and most importantly, it cannot derive a causative construction from a stem that has not already been marked by a causative marker or by a basic derivative form. In (59a) *-ta* renders a basic transitive/causative structure where the subject imposes some change on the object. We will call this “FIRST LEVEL CAUSATIVE.” Given an already causative construction, *-tara* designates in (59b) and (60b) an inductive indirect causative that we will call “SECOND LEVEL CAUSATIVE”:

- (59) a. *Valeria hawa-ta-s-0-ti* *Yuyani-ni*
 Valeria stand-CAUS-PERF-PRES-IND.3 Yuyani-OB
 ‘Valeria lifted Yuyani (from the ground)’
 b. *Adrianu hawa-ta-tara-s-0-ti* *Yuyani-ni Valeria-ni*
 Adrian stand-CAUS-CAUS-PERF-PRES-IND.3 Yuyani-OB Valeria-OB
 ‘Adrian made Yuyani lift Valeria (from the ground)’
- (60) a. *Valeria umi-rhu-ta-s-0-ti* *chpíri-ni*
 Valeria suffocate-top-CAUS-PERF-PRES-IND.3 fire-OB
 ‘Valeria suffocated the fire (intentionally, by poring water on it)’
 b. *Adrianu umi-rhu-ta-tara-s-0-ti* *chpíri-ni*
 Adrian suffocate-top-CAUS-CAUS-PERF-PRES-IND.3 fire-OB
Valeria-ni
 Valeria-OB
 ‘Adrian made Valeria suffocate the fire’

In all cases *-tara* takes the semantic/morphological representation of the basic causative to derive a more complex event. There are no restrictions for *-tara* to take any first level causative construction. (61) illustrates the combination of *-tara* with *-ku*:

- (61) *Adrianu kachu-ku-tara-s-0-ti* *Yuyani-ni sintari-ni*
 Adrian break/long-CAUS-CAUS-PERF-PRES-IND.3 Yuyani-OB line-OB
 ‘Adrian made Yuyani cut the line (i.e. in half with a knife)’

Nor are there any restrictions regarding the valence of the base form. Clear examples of *-tara* causatives with transitive stems are already given in (60b) and (61). Example (62b) shows the combination of *-ra* and *-tara* with an intransitive stem, while (63b) is an example of a *-ku-tara* combination with a ditransitive stem:

Intransitive stem:

- (62) a. *Adrianu ché-ra-s-0-ti* *Yuyani-ni*
 Adrian fear-CAUS-PERF-PRES-IND.3 Yuyani-OB
 ‘Adrian frightened Yuyani’

- b. *Adrianu ché-ra-tara-s-0-ti* *Yuyani-ni Valeria-ni*
 Adrian fear-CAUS-CAUS-PERF-PRES-IND.3 Yuyani-OB Valeria-OB
 ‘Adrian had Yuyani frightened Valeria’

Ditransitive stem:

- (63) a. *Adrianu ínts-ku-s-0-ti* *ma tsítsiki Yuyani-ni*
 Adrian give-CAUS-PERF-PRES-IND.3 a flower Yuyani-OB
 ‘Adrian gave Yuyani a flower’
- b. *Valeria ínts-ku-tara-s-0-ti* *Adrianu-ni ma tsítsiki*
 Valeria give-CAUS-CAUS-PERF-PRES-IND.3 Adrian-OB a flower
Yuyani-ni
 Yuyani-OB
 ‘Valeria made Adrian give a flower to Yuyani’

Most notably the *-tara* construction cannot be reflexive. Notice from (64) that the reflexive marker *-kurhi* commutes with a first level causative marker, such as *-ku*. This suggests that the reflexive can only co-refer with the subject of the activity actually being performed. Thus *-tara* is consistently preserved to signal indirect initiation:

- (64) *Adrianu jupi-ta-kurhi-tara-s-0-ti* *anhatapu-rhu*
 Adrian grab-LOC-REFLX-CAUS-PERF-PRES-IND.3 tree-LOC
Yuyani-ni
 Yuyani-OB
 ‘Adrian made Yuyani hold from the tree’

The complexity of the event is not solely determined by the valence of the verb but also by its semantic complexity. Given that some causative/transitive markers can designate basic initiation, *-tara* introduces a new inductor to designate a second level causative event. In (61) *-tara* combines with *-ku* to derive a second level causation structure. Now, if the verb stem designates a subject already active, the use of *-ku*, *-ra* or *-ta* derives a second level inductive causative. Adding *-tara* to this causative construction will lead to a third level causative event. This type of construal can be marked for *-ku* or *-ta*, however *-ra* is the most common one. (65b) is an example of the indirect causative *-tara* combining with *-ku*, while (66b) shows the more representative *-ra-tara* combination:

THIRD LEVEL INITIATION. [Verb + second-level-caus + *-tara*-]:

- (65) a. *Yuyani arha-cha-ku-s-0-ti* *Adrianu-ni*
 Yuyani open-mouth-CAUS-PERF-PRES-IND.3 Adrian-OB
 ‘Yuyani opened Adrian’s mouth’

- b. *Eratzini arha-cha-ku-tara-s-0-ti* *Yuyani-ni*
 Eratzin open-mouth-CAUS-PERF-PRES-IND.3 Yuyani-OB
Adrianu-ni
 Adrian-OB
 ‘Eratzin had Yuyani made Adrian open his mouth’
- (66) a. *Adrianu ché-ra-s-0-ti* *Yuyani-ni*
 Adrian fear-CAUS-PERF-PRES-IND.3 Yuyani-OB
 ‘Adrian frightened Yuyani’
- b. *Eratzini ché-ra-tara-s-0-ti* *Yuyani-ni Adrianu-ni*
 Eratzin fear-CAUS-CAUS-PERF-PRES-IND.3 Yuyani-OB Adrian-OB
 ‘Eratzin had Yuyani frighten Adrian’

An even more complex situation is found when *-ra* marks either transitive or ditransitive stems. Since *-ra* inserts an inductive causer, *-tara* incorporates an extra inductor that makes the causer of *-ra* an intermediate causer. The examples in (67) involve transitive stems, while those in (68) are ditransitive. The more complex causative *-ra-tara* construction is exemplified in (67b) and (68b):

FOURTH LEVEL INITIATION. [Transitive/causative verb + *-ra* + *-tara*]

- (67) a. *Valeria urhu-ra-s-0-ti* *tsíri-ni Eratzini-ni*
 Valeria grind-CAUS-PERF-PRES-IND.3 corn-OB Eratzin-OB
 ‘Valeria made Eratzin grind the corn’
- b. *Valeria urhu-ra-tara-s-0-ti* *tsíri-ni Eratzini-ni*
 Valeria grind-CAUS-CAUS-PERF-PRES-IND.3 corn-OB Eratzin-OB
Yuyani-ni
 Yuyani-OB
 ‘Valeria had Eratzin make Yuyani grind the corn’
- (68) a. *Valeria arhi-ra-s-0-ti* *ma wantantskwa Yuyani-ni*
 Valeria tell-CAUS-PERF-PRES-IND.3 a story Yuyani-OB
Adrianu-ni
 Adrian-OB
 ‘Valeria made Yuyani tell a story to Adrian’
- b. *Eratzin arhi-ra-taras-0-ti* *ma wantantskwa*
 Eratzin tell-CAUS-CAUS-PERF-PRES-IND.3 a story
Valeria-ni Yuyani-ni Adrianu-ni
 Valeria-OB Yuyani-OB Adrian-OB
 ‘Eratzin had Valeria make Yuyani tell a story to Adrian’

Theoretically speaking there is no structural restriction to derive even more complex causative events adding extra *-tara* markers. However the combination

Table 1. Degrees of causation

Direct causation	Indirect causation		
	Volition Unstressed	Volition Stressed	Intermediary Causer
<i>-ku, -ra, -ta</i>	<i>-ra</i>	<i>-ta</i>	<i>-tara</i>

-ra-tara-tara, we think, is rarely used. The restrictions are not structural; they come from the difficulty to track down so many intermediate inductors.

The semantic space of synthetic causatives is distributed along a chain of increasing manifestation of both, the initiative capacity of the causer, and the independence of action of the causee. This is organized in a somewhat finer contrast, as shown in Table 1.

While *-ku* is restricted to direct causation, *-ra* and *-ta* tend to derive both direct and indirect causative constructions, as determined by the degree of activity of the verbal stems. The causer's volition is most clearly manifested in *-ta* with a higher degree of will than *-ku* and even *-ra*. The only maker strictly specialized in indirect causation is *-tara*. It is unspecified for volition and it marks all kinds of second, third and fourth level causation. Moreover, as *-tara* introduces a more distant causer, it may allow other intermediary causers to impinge on the causee's performance.

In all these cases the causative construction implies that the causee must undergo or perform the action being imposed by the causer. As we move to *-tara* arenas the degree of independence of the causee is higher as two subevents can be observed. Yet in no case can it be implied that the causee can choose to not execute the causer's commands. Periphrastic causative constructions seem to respond to higher degrees of complexity where the causee may actually deny doing the causer's commands.

4. Periphrastic causatives

As direct contact causation diminishes in favor of more inductive indirect causation, the event tends to be divided in two subevents. The synthetic construction covers all direct contact causatives and an important part of inductive indirect ones: the obligatory causatives. In contrast, the periphrastic construction highlights the force-dynamics of two semi-independent events: one in which the causer induces an action and another in which the action is developed by the causee with some degree of resistance.

Morphological causatives designate a type of direct or indirect causation whose development is not under scrutiny: the causee must always perform the caused

event. The way the causer initiates the event is irrelevant. Periphrastic causatives, in contrast, elaborate the way initiation is imposed. The more the initiative inductive force of the causer is profiled, the more the periphrastic construction is required. Moreover the more independence there is between the two subevents, the more is the causee able to resist the causer's commands. This view will in fact account for the different causative patterns found in periphrastic constructions.

Let us first point out some coding facts about periphrastic causatives:

- The causal event is expressed by means of two verbs and thus by two clauses.
- The first verb designates some type of initiative action while the second predicates the actual action being performed.
- The main inductive verb is fully marked for inflection.
- Non-infinitival caused verbs take perfective aspect; however, there is no person agreement marking.

Main and subordinate verbs, underlined to facilitate the reading, agree in aspectual marking: present perfective in the main clause determines conditional or future subjunctive in the caused clause (69), the former being less stringent than the latter:

- (69) *Ricardu arhi-s-0-ti Valeria-ni éski arhi-a-ka*
 Ricardo tell-PERF-PRES-IND.3 Valeria-OB COMP tell-FUT-SUBJ
ma wantantskwa Yuyani-ni
 a story Yuyani-OB
 'Ricardo told Valeria to tell Adrian a story'

Other crucial facts depending on the degree of independence of the causee must be considered:

- The subordinate causee may raise as primary object in the main clause.
- The subordinate clause may be introduced by the complementizer *éski*.
- The caused verb takes subjunctive or infinitive marking

We suggest in Table 2 that these properties will align in two ways depending on the degree of independence of the two subevents. We will assume that the event gains complexity as the causee's independence increases. The marking patterns align as follows:

Table 2. Degree of independence and event complexity

Dependent causee Simplex event	Independent causee Complex event
Raised causee	Non-raised causee
No complementizer	Complementizer
Infinitival caused verb	Subjunctive caused verb

There are a number of verbs that designate some type of causation. In (70) we provide a list of the most common ones.

- (70) *axani* ‘send’,
jwinaani ‘allow’
jurajkuni ‘let’
arhini ‘tell’
úni ‘make’

Dixon (2000) adopts a narrow interpretation of a prototypical causative construction where a morphological process or a verb only has an abstract causative meaning. In English *make* only has causative meaning, while *order* also refers to an act of speaking. According to Dixon, *make* is characterized as causative, *order* is not.

Dixon’s narrow interpretation is too rigid to handle the Tarascan data; however, it will allow us to show how the semantic space of causation is distributed. According to that view, from the list of verbs in (70) only *úni* ‘make’ would be a true causative verb. *Jwinaani* ‘allow’ and *jurajkuni* ‘let’ could also be considered as causative, depending on whether those verbs would imply verbal consent in Tarascan; however *axani* ‘send’ and *arhini* ‘tell’ are too weakly implicative to be considered as causative forms.

Moreover, *úni* is the verb that most strongly requires obligatory execution of the caused action. All other verbs allow the causee to not fulfil the causer’s commands. The following is an example with *arhini* ‘tell’:

- (71) *Eratzini arhi-s-0-ti* *Adrianu-ni éski arhi-a-ka*
 Eratzin tell-PERF-PRES-IND.3 Adrian-OB COMP tell-FUT-SUBJ
ma wantantskwa Yuyani-ni ka no wéka-s-0-ti
 a story Yuyani-OB but no want-PERF-PRES-IND.3
 ‘Eratzin told Adrian to tell a story to Yuyani but he did not want to’

If *úni* is used in (71), there is a strong implication that the caused event is soon to be accomplished. Interestingly enough *úni* is not the prototypical Tarascan causative verb: it is rarely used as causative and it does not have the marking properties expected for grammaticized causative verbs. In order to offer an explanation for this apparently aberrant behavior, we will provide individual descriptions of each causative verb listed in (70).

4.1 *Úni*

The marking pattern of *úni* ‘make’ suggests a very low degree of grammaticization. Notice first that in *úni* causatives the causee does not raise as object of the main clause. In (72) and (73) the causee remains as the subordinate subject in the caused

clause. The subordinate clause is introduced by the complementizer *éski* and the verb is marked for subjunctive:

- (72) *Ji ú-sin-0-ka éski-ksi sapi-icha joren-kurhi-a-ka*
 I make-HAB-PRES-IND.1/2 COMP-PL.3 boy-PL know-RFLX-FUT-SUBJ
 ‘I make the boys learn’
- (73) *Valeria ú-s-0-ti éski Adrianu mana-kurhi-a-ka*
 Valeria make-PERF-PRES-IND.3 COMP Adrian shake-RFLX-FUT-SUBJ
 ‘Valeria made Adrian shake’

The fact that the causee remains as the subordinate subject suggests that *úni* has preserved most of its properties as a full non-causative verb even in the causative construction. The causee does not raise because, in face of a noun, *úni* is interpreted as a full verb. Thus raised nouns are consistently interpreted not as causees but as real objects, that is, as effected objects created or produced by the subject. Example (74) involves an inanimate object:

- (74) *Ji ú-s-0-ka ma waxantsikwa*
 I make-PERF-PRES-IND.1/2 one chair
 ‘I made a chair’

Crucially in (75) a human object is not a causee but a created representation of *Juanu* (a painting, a sculpture or a drawing):

- (75) *Ji Juanu-ni ú-s-0-ka*
 I Juan-OB make-PERF-PRES-IND-1/2
 ‘I made a painting of John’s’ Lit: ‘I painted John’

The causative reading ‘I made John paint’ can only be obtained with a morphological causative or with an alternative causal verb. Since *úni* is not fully grammaticized as a causative verb, the causee as such cannot occupy the object position.

Moreover, as a full verb, *úni* can take the marker *-ra* to derive a causative construction:

- (76) *Ji ú-ra-s-0-ka ma waxantsikwa Juanu-ni*
 I make-CAUS-PERF-PRES-IND1/2 a chair Juan-OB
 ‘I made Juan make a chair’

In (76) *úni* is not a causative verb but a plain transitive with low coercive strength. Indirect causation is coded by the causative suffix *-ra*.

The semantics of *úni* carries the strong implicature that the caused event must be executed. Its low frequency as a causative verb is thus puzzling. The reason is that the core causative meaning is already covered by morphological means. We must expect that other causative verbs will be employed to signal causal situations

other than those covered by synthetic causation morphemes. This is in fact the case. We will show that *axani* ‘send’ and *jwinaani* ‘allow’ are ahead in the grammaticization process, as they cover specific areas not accessible to morphemes. We have already pointed out that periphrastic causatives elaborate in finer detail the initiative force of the causer. While Dixon’s strict interpretation would rule them out of the causal arena, the fact that they are quite advanced in the grammaticization process suggests that a less strict interpretation is necessary.

4.2 Axani, Jwinaani

The causal meanings designated by these verbs are related to oral commands involving some trajectory (*axani* ‘send’) and permission (*jwinaani* ‘allow’). There is clear evidence of the grammatical status of these verbs: the subordinate verbs occur in infinitive, the causee is incorporated as object of the main clause and the complementizer *éski* is absent. In (77a), the causee is incorporated as the primary object. In (77b) both the causee and the subordinate object raise to the main clause as primary and secondary objects of *axani*:

- (77) a. *Valeria axa-s-0-ti* *Adrianu-ni ch’ana-ni*
 Valeria send-PERF-PRES-IND.3 Adrian-OB play-INF
 ‘Valeria send Adrian to play’
- b. *Adrianu axa-s-0-ti* *Eratzini-ni wichu-ni exe-ni*
 Adrian send-PERF-PRES-IND.3 Eratzin-OB dog-OB see-INF
 ‘Adrian send Eratzin to see the dog’

This grammatical behavior suggests a high degree of grammaticization as well as a high level of event integration. Exactly the same situation is found with *jwinaani* ‘allow’ as can be seen from (78):

- (78) *Adrianu jwinaa-s-0-ti* *ime-eri kats’ikwa-ni Eratzini-ni*
 Adrian allow-PERF-PRES-IND.3 this-GEN hat-OB Eratzin-OB
hupi-ka-ni
 take-MDL-INF
 ‘Adrian allowed Eratzin to take his hat’

Given their degree of semantic specification these verbs are frequently used in the appropriate contexts. They are not pure causative verbs for they can easily be denied. With respect to (77b) Eratzin may decide to go somewhere else instead of seeing the dog, in the same manner that Eratzin is free not to take the hat in (78). As already pointed out, pure causation is coded in Tarascan by morphological causatives. Given a higher degree of independence, the causer’s initiative ac-

tion is more elaborated. The potential resisting capacity of the causee is also more transparent. We have thus a more complex event.

In Tarascan there are at least two verbs of permission. *Jwinaani* ‘allow’ holds a higher degree of subject control, *jurajkuni* ‘let’ is much weaker. Crucial to the proper understanding of the *jwinaani/jurajkuni* contrast is the fact that *jwinaani* cannot take any first level causative marker while *jurajkuni* can. Thus **jwinaa-ta-ni*, **jwinaa-ra-ni*, **jwinaa-ku-ni* are all illegal outputs. The lower degree of causation of *jurajkuni* is granted. This semantic difference also reflects the type of causation they involve and the type of syntactic coding they require. As will be seen below, the behavior of *jurajkuni* follows the pattern of less grammaticized verbs.

4.3 Jurajkuni

As a non-causative verb *jurajkuni* ‘let/leave/abandon’ highlights the interruption or lack of subject control over the object, as can be seen from (79):

- (79) *Maria juraj-ku-s-0-ti wájpa-ni*
 María let-CAUS-PERF-PRES-IND.3 kin-OB
 ‘Maria abandoned her daughter’

It can be predicted that causation with *jurajkuni* will be less stringent than that with *jwinaani*. This is in fact the case. More than initiating the event, in (80), the causer simply constitutes no barrier for the causee’s actions:

- (80) *Maria juraj-ku-s-0-ti wájpa-ni para nira-ni*
 María let-CAUS-PERF-PRES-IND.3 kin-OB para go-INF
kw’inchikwa-rhu
 party-LOC
 ‘María let her daughter go to the party’

The syntactic marking suggests a somewhat lower degree of grammaticization: the causee raises as the object of the main verb, the complementizer *éski* does not occur and the subordinate verb takes infinitive. All these are features of a well grammaticized verb. Yet the caused clause is introduced by *para*, a benefactive/final preposition borrowed from Spanish. As is commonly the case for most benefactive markers, *para* underlines the subject’s “volitional trajectory” (Maldonado 1992, in press) i.e. the subject’s intentions in doing some action in favor of someone or in order to accomplish some goal. However, borrowed into Tarascan, *para* underlines not the causer but the causee’s intentions to achieve something. Thus *jurajkuni* combined with *para* depicts a higher degree of independence of subevents where a low degree of causer control is involved in contrast with a higher degree of causee volition. In

(80) Maria's daughter's intentions to go to the party constitute the primary figure of the event.

4.4 Arhini

The least grammaticized causative verb after *úni* is *arhini* 'tell'.⁸ Although the causee raises to the main clause as the primary object, the two subevents are more independent. This can be seen from the fact that the verb of the caused event is coded in subjunctive and the subordinate clause is introduced by the complementizer *éski*:

- (81) a. *Valeria arhi-s-0-ti Eratzini-ni éski*
 Valeria tell-PERF-PRES-IND.3 Eratzin-OB COMP
pire-ra-a-ka Adrianu-ni
 sing-CAUS-FUT-SUBJ Adrian-OB
 'Valeria told Eratzin to make Adrian sing'
- b. *Ji arhi-s-0-ka Valeria-ni éski ewa-a-ka*
 I tell-PERF-PRES.IND.1/2 Valeria-OB COMP take-FUT-SUBJ
ma kwaxanta tsíkata-ni
 an egg chicken-OB
 'I told Valeria to take an egg from the chicken'

As we have already suggested, periphrastic constructions profile the way in which the causer induces some action on the causee. *Arhini* 'tell' highlights the fact that the causer initiates the event verbally. *Arhini* is the verb most frequently used in reported speech. This may respond to several factors. For one thing, indirect causation normally involves oral commands (Shibatani and Pardeshi, this volume). Moreover, as opposed to *axani*, *jwinaani* and *jurajkuni*, *arhini* designates a more generic meaning: it does not specify whether there is strong or weak permission, or if there is a location or a path to follow. Since all verbs imply verbal causation *arhini* may function as an umbrella-term for oral indirect causation. More elaborate verbs will only be used in specific contexts.

It is also the case that *arhini* is neutral with respect to the causee's reaction. Recall that in morphological causatives the causee must perform the causer's imposition while in periphrastic causatives, the causee needs not obey the causer's commands. In lack of further specification about either the causer or the causee's behavior, *arhini* is a good candidate to represent causation in skeletal terms. This may explain not only the fact that *arhini* is the default verb for periphrastic constructions but also that it may also be used instead of *-tara*. This high frequency of verbs of TELLING for causative generic purposes is not only present in Spanish (*decir* causative) and other Romance languages but it is quite common in other lan-

guages of the Americas with the same wide range of use (see for example Vázquez and Payne in this volume).

This view runs parallel to previous observations (Givón 1990; Comrie 1973, 1985; Dixon 2000) that in causative constructions there is a contrast in the degree of coercive effort that the causer imposes on the causee. We suggest that *-tara* reflects a more coercive situation than *arhini*. Thus *-tara* implies strong causation that need not be further specified, while in the periphrastic construction with *arhini* the causee is less compelled to perform the induced action. Degree of elaboration is iconically motivated by the strength of coercive force and event independence. As coercive forces decrease, subevents gain independence. Thus coding is more elaborate.

The degree of grammaticization of causal verbs matches nicely with the type of meaning being conveyed. Based on their syntactic behavior, we can see the following gradual organization:

Table 3. Degree of grammaticization

more grammaticized		less grammaticized	
● Raised causee	● Raised causee	● Raised causee	● Non-raised causee
● Infinitival comp.	● Infinitival comp.	● Subjunctive comp.	● Subjunctive comp.
● No complementizer	● <i>para</i> complementizer	● <i>éski</i> complementizer	● <i>éski</i> complementizer
<i>Axani</i> 'send'	← <i>Jurajkuni</i> 'let'	← <i>Arhini</i> 'tell'	← <i>Uni</i> 'make'
<i>Jwinaani</i> 'allow'			

The most grammaticized verbs correspond to a quite specific type of indirect causation, which highlights the type of initiative action developed by the causer. The least grammaticized verb *úni* is hardly ever used as a causal verb, for it maintains its verbal root meaning. The causal meaning types expected for *úni* are covered by causal synthetic morphemes. Finally, a generic verb of saying, low in the grammaticization process, covers most cases where the causer's initiative action is presented in a schematic oral manner.

5. Conclusions

Tarascan comprises a nicely organized causal system based on event complexity: direct and strong indirect causation is marked synthetically, while more complex events with higher causer/causee independence are coded by periphrastic strategies. Within each subsystem, the same phenomenon is observed. In the synthetic causal system, there is a progression from direct contact to indirect causation where the volitional strength of the causer increases in the *-ku* > *-ra* > *-ta* continuum. An

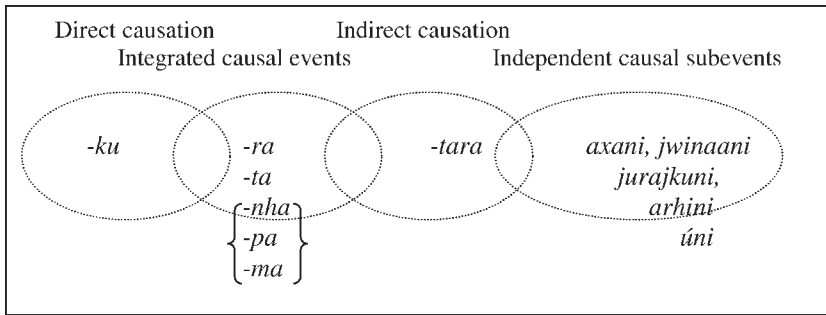
important increase in the complexity of the event is depicted by *-tara*, a complex morpheme specialized in indirect derived causation where an intermediary causer is commonly designated. In the periphrastic system, verbs grammaticize depending on the degree of specificity of the initiative input of the causer. Given this system, the almost absent use of the verb *úni* ‘make’ is accounted for by the fact that its core meaning is coded synthetically by causative morphemes.

This system also reveals that the contrast between direct and indirect causatives as redefined by Shibatani and Pardeshi (this volume) is the starting point for more elaborate systems. Consequently, the indirect system is subject to further classification since the ways in which the causer imposes some action on the causee may vary depending on transitivity, control, volition, directness, naturalness and involvement (Dixon 2000). Tarascan has proven to specialize one morpheme for directness (*-ku*), while all other indirect morphemes (*-ra*, *-ta*) are organized depending on the degree of the causer’s volition (control in Dixon’s terminology). More indirect causation is depicted by *-tara*. Since there may be intermediary causers, volition is simply implied. Causal verbs designate the causer’s volition, taken now to further specification. Moreover they designate events with higher degree of complexity where the two subevents tend to be conceptualized with a higher degree of independence.

The difference between *-tara* and periphrastic causatives is a question that immediately arises. Since both *-tara* and causative verbs specialize in indirect causation, there is considerable overlap between them. However the contrast between them is crucial. Periphrastic causative constructions give special prominence to the way the event is initially caused. In contrast, morphological causatives let the “causative force” be present in a more schematic manner. Consequently *-tara* highlights a more stringent type of causation. The causer’s initiation is taken as a basic fact such that the caused event is highlighted. Recall that causative *-tara* is closely related to – and most probably develops from – a stress volition instrumental marker which draws the inference that the caused event will be enforced. Thus the causee of a *-tara* construction is always compelled to accomplish the causer’s desires. This of course is not the case for periphrastic causatives where the causee can actually opt not to follow the causer’s commands.

Scale 4 shows that the increase in complexity involves a clear distribution for each marker with some motivated overlap.

We have proposed that causative Tarascan markers are organized according to the degree of complexity of the event. Complexity has been defined here as the degree of elaboration that a causative event may have. We assumed that all causative events involve two parts: an inductive and a performing action. In the simplest case these two are indistinguishable, thus an agent imposes some change on a patientive theme generally through direct contact. Complexity increases as a consequence of differentiating initiation from action. Once initiation is clearly depicted, Tarascan



Scale 4. Degree of causative induction

is flexible to have intermediate inductors. Causation increases as plain direct transitive contact decreases. We have proposed that Tarascan causative constructions gain complexity according to the already proposed scale: **direct contact** > **neutral induction** > **compelling induction** > **verbal initiation** > **initiation by some intermediate means**.

Cognitive Grammar offers a motivated explanation for event complexity increase in Tarascan causatives. We will assume a canonical representation of events following Langacker's (1991) where energy flows down stream from an active agentive participant to a thematic one. The latter undergoes a change-of-state as a result of the energy imposed by the agentive participant. This canonical model represents the basic structure of a transitive clause. In Figure 1, the active agentive participant is represented by the circle with the double arrow, while the thematic element is the circle with the squiggly arrow. The rectangle represents the whole event:



Figure 1

From this basic representation, we can show how the event gains complexity. In the most basic situation *-ku* introduces a type A participant to an event constituted by an inactive thematic participant B. The result is a derived direct causative construction that parallels the prototypical transitive construction. In Figure 1, transitive and direct causative constructions only differ in that the latter is a derived structure. The next level of complexity is obtained by introducing A to an already active A participant (Figure 2). This corresponds to the most basic representation of *-ra* and *-ta*. An even higher degree of complexity comes from applying A to a transitive event (Figure 3). This coincides with the semantic space covered by *-ra*, *-ta* and *-tara*. The original subject agent, the causee, loses agentivity by virtue of being down stream from the causer. The degrees of agency and control of the causer

are not represented to simplify the representation of the main patterns. The prototypical construal depicted by *-tara* involves introducing a new A participant which turns the original A₁ into an intermediary inductor A_n, as Figure 4 shows.

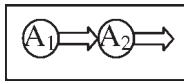


Figure 2

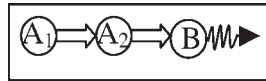


Figure 3



Figure 4

Crucial to these schematic representations is the fact that, albeit their complexity, they all constitute a unitary event. The degree of integration of the participants in the event guarantees enforcement of causation. This is in contrast with the way periphrastic causatives work. The initial situation involves two subevents where the caused event is downstream from A₁. Depending on the degree of grammaticization of the causal verb, A₂ will be integrated as the object of the causal subevent in the main clause as it happens with *axani* and *jwinaani* (Figure 5). In less grammaticized verbs (*jurajkuni* and *arhini*), the degree of integration is lower and the caused event gains independence from the causer's energy input (Figure 6). Finally, *úni* represents a mismatch between the semantic content of the verb and its degree of grammaticization. The syntactic marking implies maximal degree of independence while the coercive content of MAKE is maximal. We have accounted for such discrepancy showing that its function is already covered by morphological causation:

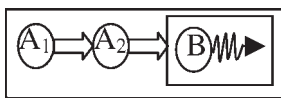


Figure 5

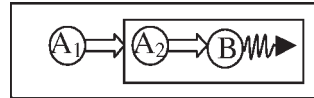


Figure 6

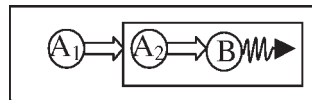


Figure 7

As opposed to recent proposals claiming that economic motivation rules out iconic motivation (Haspelmath 1999), our data speak strongly in favor of iconicity. Not only are causative morphemes specialized by stem classes (unmarked, middle marked, locative marked) but also the type of causation they signal is sensitive to the degree of subject volitional agentivity of the stem they mark. Moreover as causation moves in the direction of signaling the initiative input of the causer to have a more complex event, both the phonological body of the marker and the

semantic/syntactic complexity of the construction increases. Both *-tara* and the periphrastic causative construction are pristine examples of iconic motivation.

Finally, Tarascan constitutes a case not commonly seen across the languages of the world where a complex verb morphology interacts with an equally complex variety of causative structures. Even more atypical is the fact that causation is complex both in synthetic and periphrastic constructions. It could be claimed, following Dixon's demands, that periphrastic causation is not strictly speaking causative since the verbs marking the construction do not have an exclusively causative meaning. However those demands would leave periphrastic causation unexplained. We have shown that causative verbs profile in finer detail the way the causer initiates the causative event. The vast complexity found in Tarascan causatives can only follow from the need of speakers to specify the different ways in which an event can be decomposed from its original initiation to its final change-of-state.

Notes

1. We would like to thank Pánfilo, Pablo, Magdalena and Marcos Ascencio, Rosa Ascencio Bautista, Ramona Estrada Torres, Rosa Ascencio Ascencio and Rosalío García for their invaluable help as native speakers of Tarascan.
2. Several traditional analyses (see Villavicencio ms) assume that Tarascan is a nominative-accusative language. However no clear nominative-accusative or accusative-dative contrast has clearly been argued for.
3. We will use the terms patient/theme and dative as semantic notions following Givón (1984), the former being non-animate and most affected while the latter being animate or human and least affected.
4. Traditional analyses have treated *-ku* as a transitivizer. Yet all descriptions coincide with the basic function of a causative marker incorporating a new causer agentive participant.
5. This morpheme is to be distinguished from the causative suffix *-ra*. While there is some evidence that these markers have a common origin, a specific diachronic study is needed to draw further conclusions.
6. For don Pánfilo Ascencio the causee was consistently sentence final. However there was an intonation shift with stress on the final NP. Stress is underlined in the following examples:

- (1) *Eratzini arhu-ku-tara-s-0-ti* *t'atsini-ni, Adrianu-ni*
 Eratzin divide-CAUS-CAUS-PERF-PRES-IND.3 beans-OB Adrian-OB
 'Eratzin made Adrian divide the beans'
- (2) *Eratzini kw'ani-ra-tara-s-0-ti* *ma tsakapu Valeria-ni,*
 Eratzin throw-CAUS-CAUS-PERF-PRES-IND.3 a stone Valeria-OB
Yuyani-ni
 Yuyani-OB
 'Eratzin made Yuyani throw a stone to Valeria'

This discourse strategy suggests that CAUSER-VERB-CAUSEE is the unmarked word order.

7. The absence of the accusative marker *-ni* on *bastoni* “cane” is accounted for by suggesting that only non-derived objects can take *-ni*. Thus *-tara* is interpreted as an indication that an oblique instrument was promoted to object.

8. We thank Matt Shibatani for correcting our analysis of this verb.

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Some constraints on Cora causative constructions¹

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Introduction

This article gives an account of several formal devices and different semantic restrictions observed in Cora,² a Southern Uto-Aztecan language of northwest Mexico, for constructing a causative situation. I study three ways in which such a situation may be expressed grammatically: lexical causatives, morphological causatives and analytic causatives. The main claim of this investigation is that a grammatical or formal device frequently shows a systematic semantic correlation. For this reason, Cora causative constructions suggest there is a strong relation between formal devices and verbal semantic classes that can be observed in this kind of situation.

Taking into consideration previous studies on linguistic causation (Shibatani 1976: 1–2; Kemmer and Verhagen 1994: 117–119; and Song 1996: 16) I will assume that causative constructions refer to a double-event situation: the causing event and the resulting event. Very frequently, the resulting event involves a change of state undergone by the causee and induced by an agentive causer or a causer entity. Another way to express the resulting event is when the external causer induces the causee to perform some kind of action. In Cora, the former type of semantic causation is more commonly found in lexical and morphological causatives, while the latter is conveyed by periphrastic causatives. In general terms, while causative constructions involve a complex event structure consisting of two sub-events, which may be integrated into a single event (as in lexical and morphological causatives) or which may be realized as two discrete events (as in periphrastic causatives), simple transitive constructions involve a simple one-event structure.

Cora has suppletive pairs as well as non-agentive ambitransitive verbs (*labile*) that have a clear semantic relation between the lexical causative verb and its non-causative counterpart. The most interesting discovery within the scope of lexical causatives is that non-agentive ambitransitive verbs are only attested in the seman-

tic class of 'break' verbs. This fact may be considered as the first piece of evidence for claiming that a formal device is also semantically restricted.

The analysis of morphological causatives is definitely more problematic. First, it is necessary to draw a formal distinction between non-directed and directed formal categories. Non-directed formal categories include both cases of inchoative derivations that produce labile verbs which can be used either as inchoatives or causatives, and cases of equipollent alternations in which the inchoative verb, and the causative verb are derived by means of different suffixes. On the other hand, in cases of non-directed formal strategies special attention is paid to the formal and semantic differences observed in the derivational process regarding the inanimate-animate distinctions, that in Cora seem to play a crucial role. The non-directed formal strategies are located within the semantic domain of stative verbs of adjectival meaning. This fact constitutes a more convincing piece of evidence for arguing that each formal device corresponds to a precise semantic class. Within the scope of morphological causatives, we can also observe the rise of directed formal categories. By means of this strategy, I found a few cases of causative verbs derived from agentive intransitive bases. The great majority of causative verbs that exhibit a directed formal strategy are derived from non-agentive intransitive verbs. Once again the formal device shows a systematic correlation with a clear semantic verbal class. The common features shared by all the verb classes that enter in a morphological causative derivation are probably the absence of agent-oriented meaning components which make them so vulnerable to the manipulation of true agentive participants, and the fact that they usually express situations that occur spontaneously.³

In Cora, once we approach agentive verbal bases semantic variation begins to appear, and we have to face heavier constraints to produce morphological causatives. An interesting consequence of these strong semantic restrictions is the rise of a causative/comitative split within a subclass of agentive intransitives. Thus, in the subclass of deictic movement verbs the Cora *bona fide* causative suffix has developed an applicative-comitative meaning.

Morphological causatives in Cora are so severely restricted that they do not allow most agentive transitive bases to undergo a derivational process by means of one of the causative suffixes available in the language. The expression of a causative situation in this verbal class involves the construction of an analytic causative in which the causee can maintain a high degree of control in the caused event. I will show that the semantics of periphrastic causatives have clear syntactic correlations which can be explained in terms of the binding hierarchy proposed by Givón (1980). The general conclusion of my study on Cora causative constructions is that causativization processes are organized formally and semantically according to the semantics of the base verbs (see Shibatani and Pardeshi in this volume).

1. Some relevant aspects of Cora grammar

Grammatical relations in Cora can be established by different kinds of subject and object marking which show an intricate interplay among several syntactic features such as word order, core clause structure, as well as topicalization and dislocation processes. This aspect of Cora grammar is crucial for understanding causative constructions because one of the most interesting topics in the study of linguistic causativity is the grammatical encoding of the causer and causee. On the other hand, it is important to establish what grammatical features in this language allow one to identify a verbal base as stative, intransitive or transitive, since causativization processes are usually organized according to the semantic and formal membership of the base verbs. I will discuss first the different types of subject and object marking related to word order and clause structure phenomena.

1.1 Subject and object marking in Cora

Cora is a nominative-accusative language in which the “S” of intransitive verbs and the “A” of transitive verbs are coded by the same type of subject marking, whereas the “O” of transitive verbs is coded by a different kind of syntactic marking (Dixon 1994). Core arguments can be marked in the verb by means of a set of subject prefixes and a different set of object prefixes. This is shown in (1).⁴

(1) Argument marking in the verb

- a. [ne-ra-i-hé?ika]
 s1SG-PO3SG-CMP-kill.POSG
 ‘I killed him.’
- b. [n-a-mí?i]
 s1SG-CMP-die.SGS
 ‘I died.’

In these examples the agent participant of the transitive construction in (1a) and the single participant of the intransitive form in (1b) share the same subject marking: the prefix *ne-* of first person singular that shows a consonantal allomorph *n-* in the intransitive construction because it precedes a morpheme beginning with a long vowel. In contrast, the object participant takes an object prefix, that in (1a) corresponds to *ra-* of third person singular.

Another type of argument marking shows up in clauses that carry full noun phrases within the core of the clause.

(2) Argument marking in clause structures with full noun phrases

- a. [Juan pú nawáʔari wa-héʔika]
 John s3SG thief CMP-kill.SGPO
 'John killed a thief.'
- b. [Juan pú wa-míʔi]
 John s3SG CMP-die.SGS
 'John died.'

In these constructions, subject marking is carried out by a set of obligatory second position subject clitics. Once again the agent of the transitive construction and the single argument of the intransitive one share the same type of argument marking, which in this case corresponds to the subject clitic *pú* of third person singular. I consider this kind of subject marking as an instance of grammatical agreement, it is always obligatory and the second position subject clitic coexists with the NP that bears the same grammatical relation within the core of the clause. Note that the object NP in these clause structures does not need any special marking, neither through an object clitic, nor by means of an object prefix. Thus in (2a) the verb carries only aspect markers.

Besides illustrating argument marking through the use of subject clitics, the set of examples in (2) shows two important syntactic features of Cora grammar. On the one hand, these examples represent the basic clause structure of the language that it is not modified either by movements to the left, such as topicalizations, or altered by movements to the right, such as dislocations or afterthought constructions. On the other hand, the clauses in (2) display what I consider to be the basic word order in Cora which is SOV or SV.⁵ Under my analytic proposal, clause structures with full noun phrases play a crucial role for defining the basic word order in the language.

Subject topicalization can be observed in clause structures with full noun phrases. This syntactic movement is signaled by the obligatory presence of determinants before the fronted NPs that occur in topic peripheral position as can be seen in (3).

(3) Subject topicalization in clause structures with full noun phrases

- a. í Juan, [nawáʔari pú wa-héʔika]
 DET John thief s3SG CMP-kill.SGPO
 'As for John, he killed a thief.'
- b. í Juan, [∅-wa-míʔi]
 DET John s3SG-CMP-die.SGS
 'As for John, he died.'

- c. í nawáʔari-te, [m^w-á-k^wi]
 DET thief-PL s3PL-CMP-die.PLS
 ‘As for the thieves, they died.’

Notice that subject fronting in the transitive construction in (3a) produces the movement of the subject clitic *pú* to its required second position, in other words, after the first constituent of the clause that corresponds to the object NP *nawáʔari* ‘thief’.

Additional evidence to consider (3a) as an S, OV sequence and not as an SOV clause structure like the constructions presented in (2), is that the sequence usually carries two different intonational contours; one of them goes with the topicalized subject whereas the other accompanies the core constituents of the clause. It is important to make clear that in cases of subject topicalization, second position subject clitics also show properties of anaphoric agreement, since they signal anaphoric relations with a coreferential subject NP that has been moved out of the core.

Interestingly, intransitive constructions with subject topicalization, such as (3b) and (3c), do not show the presence of second position subject clitics. This is due to the fact that in intransitive sequences movement of subject NPs to peripheral positions turns the verb form into the single constituent of the core. In these cases, a second position is unavailable and subject clitics cannot occur as subject markers. Since subject marking is always required in Cora, the intransitive constructions in (3b) and (3c) choose to mark this argument by means of subject prefixes. This argument marking is clearly visible in (3c) where the subject is marked by the *m^w*- prefix of third person plural. It is less explicit in (3b) because the third person singular is expressed by a zero.

Convincing evidence that strengthens this analysis is provided by intransitive clauses with topicalized subjects that carry quantifiers, adverbs or negative markers. See the set of examples in (4).

- (4) Subject topicalization in intransitive clauses that carry quantifiers, adverbs and negative markers
- a. í Juan, [ka pu wa-míʔt]
 DET John NEG s3SG CMP-die.SGS
 ‘As for John, he did not die.’
- b. í Juan, [héiwa pu wa-naʔanai]
 DET John QUANT s3SG CMP-laugh
 ‘As for John, he laughed a lot.’

Besides the verb form, the core of the clause both in (4a) and in (4b) bears another constituent, the negative marker *ka* and the quantifier *héiwa* respectively. These elements fill the first position of the clause and this fact makes possible the occurrence of second position subject clitics.

Different subject marking in transitive constructions such as (3a) and intransitive constructions such as (3b) and (3c) should not lead us to conclude that Cora has a different kind of subject marking depending on the transitivity of the clause. The different type of argument marking, by means of clitics in (3a) and through prefixes in (3b) and (3c), is due to the intricate interaction among core clause structure, topicalization processes and obligatory second position subject clitics, as I have shown above. The discussion of these aspects of Cora grammar is relevant because most of the causative constructions with full noun phrases and their non-causative counterparts that I cite in this paper correspond to the type of constructions illustrated in (3). In other words, they are verb final word order structures with topicalized subjects. I will use this type of examples because this is the kind of construction that we usually get in elicited examples, and my study on linguistic causativity is based mostly on this sort of language data. I will also use verb forms of the type illustrated in (1) where both subject and object are explicitly marked through prefixes, since argument marking on the verb neatly allows us to observe the grammatical encoding of the causer and causee in causative constructions.

Finally, I would like to point out that argument marking in the verb by means of prefixes, such as the one illustrated in (1), is always analyzed as an instance of anaphoric agreement because it systematically signals a coreference relationship between an NP that occurs outside of the core in some sort of peripheral position, whether it is a topic position or an afterthought or dislocated construction.⁶ The next example shows object topicalization:

(5) Object topicalization

í nawáʔari, [Juan pú ra-r-héʔika]
 DET thief John s3SG PO3SG-CMP-kill.SGPO
 ‘As for the thief, John killed him.’

As expected, the fronted object NP that moves out of the core is obligatorily preceded by a determinant. The finding from this sequence is that object topicalization does trigger object marking. Notice that the object prefix *ra-* of third person singular is present in the verb. Thus, the object NP in peripheral position is necessarily coreferenced in the verb by means of an object prefix.

This same type of anaphoric relation shows up in afterthought constructions in which the verb that carries argument marking through prefixes is followed by a subject NP, or by an object NP, or both. The relevant examples figure in (6).

(6) Argument marking on the verb in afterthought constructions

a. [∅-ra-r-héʔika], í Juan í t,áska
 s3SG-PO3SG-CMP-kill.POSG DET John DET scorpion
 ‘He killed it, John, the scorpion.’

- b. [ne-ra-ɾ-héʔika], í t,áska
 s1SG-PO3SG-CMP-kill.POSG DET scorpion
 'I killed it, the scorpion.'
- c. [m^w-á-k^wi:], í nawáʔari-te
 s3PL-CMP-die.PLS DET thief-PL
 'They died, the thieves.'

In all these cases an anaphoric relation is established by means of subject and object prefixes. This type of constructions will also be used in the present paper for illustrating linguistic causativity in Cora.

Hereafter the anaphoric agreement displayed by subject and object prefixes in Cora will be employed as a diagnostic for discovering the grammatical encoding of the causee in the causative constructions in the language. I am unable to use other diagnostics because they are inexistent or problematic; for instance, unlike Yaqui, case marking within noun phrases has been lost in Cora. On the other hand, Cora lacks agentive passives. Finally accessibility to relativization is possible for both subject and all types of objects. However, the main proofs involved in understanding relative clause formation in Cora correspond quite neatly to the anaphoric agreement test, but this test is more difficult to describe in the case of relativization. Thus, for the sake of simplicity, I will restrict myself to the coding property of anaphoric agreement in the verb, when I establish the main grammatical relations that can be postulated in this Uto-Aztecan language. Nevertheless, besides the pronominal anaphoric versions, clauses with full noun phrases will always be cited, so that a complete causative construction in Cora can be observed.

The set of subject and object prefixes that exhibit anaphoric agreement, as well as the set of second position subject clitics are given in Table 1. In this table, the set of subject clitics that introduce the level of a subordinate clause in Cora is also shown. This last set of markers will be crucial in Section 4, when we approach the issue of analytic causatives.

The fact that Cora has a single set of elements for object marking could represent a potential source of problems for marking the causee in those causative constructions derived from verbs that basically have two arguments. In these cases, we have to face the more serious issue of increase in valency. I will show later that a wide range of semantic and syntactic restrictions for deriving morphological causatives and constructing analytic causatives collaborate in an interesting way to solve this problem.

Table 1. Subject and object marking in Cora (Meseño dialect of Presidio de los Reyes, Nayarit)

Independent subject pronouns	Grammatical agreement		Anaphoric agreement		
	Subject clitics	Subject clitics of subordinate clause	Subject prefixes	Primary object prefixes	
1SG	íneʔ	nu	neh	ne-~n-	ne-~n-
2SG	m ^w éʔe	pe	peh	pe-~p ^w -	m ^w a-
3SG	haʔíhna DEM	pu	tɪ	∅-	ra- y-
1PL	ítein, íten	tu	teh	te-~t-	ta-
2PL	m ^w éʔen	su	seh	se-~s-	hám ^w a-
3PL	meʔíhna DEM	mu	meh	me-~m ^w -	wáʔa-~go-

1.2 Criteria for distinguishing stative, intransitive and transitive verbal bases in Cora

One of the grammatical features that allows us to identify the formal membership of a verbal base in Cora is the *tíʔi-* prefix, an antipassive marker that is attached only to transitive bases when they are used intransitively.⁷ This prefix turns a transitive verb into an intransitive with an accompanying shift in meaning from a specific to a generalized activity.⁸ Intransitive bases do not require this prefix to indicate the generalized activity denoted by the verb, and *tíʔi-* prefixation is even considered ungrammatical for this verbal class. On the other hand, transitive verbs take directly object prefixes without requiring a category-changing apparatus of verb derivation, such as causativization or applicative derivation. This last feature is probably the crucial test for dividing transitives from intransitives. A set of contrasting pairs is given in (7).

(7) Intransitive and transitive verbal bases

- a. ne-tíʔi-m^wariʔe
s1SG-ANTIPASS-work
'I work.'
- b. ne-tíʔ-u-m^wariʔe
s1SG-ANTIPASS-CMP-work
'I worked.'

- c. ne-ra-:-m^wáɾɪʔe
 s1SG-PO3SG-CMP-work
 'I worked it.' (the corn field)
- d. ne-híhwa
 s1SG-shout
 'I shout.'
- e. n-á:-híhwa-kaʔa
 s1SG-CMP-shout-PAST
 'I shouted.'
- f. ne-ra-:-híh-be
 s1SG-PO3SG-CMP-shout-APPL
 'I shouted at him.'

(7a) and (7b) illustrate that a basically transitive verb such as *m^wáɾɪʔe* 'to work' when used intransitively requires obligatorily the addition of *tíʔi-* prefix, whereas a basic intransitive verb such as *híhwa* 'to shout' expressed in (7d) and (7e) does not need this prefix. An object prefix can be attached directly to the transitive verb in (7c), whereas in (7f) the verb *híhwa* 'to shout' needs to undergo an applicative derivation in order to take such argument marking. Notice that the absence of the *tíʔi-* prefix triggers different forms for subject prefixes when intransitive verbs express past tense. In this case, intransitive verbs take the set of consonant subject allomorphs *n-* 'S1SG', *p^w-* 'S2SG', *t-* 'S1PL', *s-* 'S2PL', and *m^w-* 'S3PL' which figure in Table 1. This is shown in (7e).

I would like to add that there is no formal criteria for distinguishing inactive from active intransitive bases. They share similar subject marking and to some extent tense-aspect marking. However, as I will show later on, the different ways in which non-agentive and agentive intransitives behave with respect to linguistic causativity are evidence that formally supports their distinctive semantic membership.

Like intransitives, stative verbal bases cannot take object prefixes directly. Statives carry another *tíʔi-* prefix that has a very different grammatical function. It indicates both subject marking and plurality of the inanimate entities that so frequently are found with this class of verbs. Thus, in some contexts inanimate entities are not allowed to take personal argument marking, through prefixes or through clitics. The fact that inanimate entities occur as subjects of stative bases formally and semantically divides statives from intransitives; in other words, the verbal bases that bear one single argument. The grammatical features typical of stative bases are shown in (8).

(8) Stative verbal bases

- a. í hám^weʔi ø-ʒéʔi
 DET tortilla s3SG-hard
 ‘As for the tortilla, it is hard.’
- b. í hám^weʔi t,íʔi-ʒeʔi
 DET tortilla PL-hard
 ‘The tortillas are hard.’
- c. í hám^weʔi ø-ʒéʔi-kaʔa
 DET tortilla s3SG-hard-PAST
 ‘As for the tortilla, it was hard.’
- d. í hám^weʔi t,íʔi-ʒeʔi-kaʔa
 DET tortilla PL-hard-PAST
 ‘The tortillas were hard.’

Tense-aspect marking also supports the stative/intransitive division. To express past tense, stative verbs require only *-kaʔa* suffixation. For this reason, a completive aspect prefix is absent in (8c) and (8d). Additional evidence for the stative/intransitive distinction comes from morphological causatives which behave quite differently with these two distinct kinds of verbal bases in terms of the formal strategies used to derive a causative verb, as I will show later on.

2. Lexical causatives

Cora shows the two common kinds of lexical causatives: (a) single lexemes that can be used in either a causative or a non-causative function; and (b) two unrelated forms that appear to be in a causative relation (Dixon 2000: 38). This second kind of lexical causatives will be examined first.

(9) Suppletive alternations with non-causative inactive intransitive counterparts

- a. í Juan nawáʔari pú wa-héʔika
 DET John thief s3SG CMP-kill.SGPO
 ‘As for John, he killed a thief.’
- b. í Juan nawáʔari-te pú wá-k^wí
 DET John thief-PL s3SG CMP-kill.PLPO
 ‘As for John, he killed the thieves.’
- c. í nawáʔari ø-wa-míʔi
 DET thief s3SG-CMP-die.SGS
 ‘As for the thief, he died.’

- d. í nawáʔari-te m^w-á-k^wi:
 DET thief-PL S3PL-CMP-die.PLS
 ‘As for the thieves, they died.’
- e. ne-ra-i-héʔika
 S1SG-PO3SG-CMP-kill.SGPO
 ‘I killed him.’
- f. ne-góʔ-u-k^wi:
 S1SG-PO3PL-CMP-kill.PLPO
 ‘I killed them.’

The lexical causative in Cora for ‘kill’ shows suppletive forms organized according to the number of the object of the transitive verb. For this reason, in (9a) the form *wa-héʔika* is used for a singular object while in (9b) the form *wá-k^wi:* corresponds to a plural object. The non-causative verb ‘die’ also exhibits suppletive stems, but in this case they are organized according to the number of the subject of the intransitive verb.⁹ Thus in (9c) the form *ø-wa-míʔi* expresses a singular subject, ‘he died’, and in (9d) the form *m^w-á-k^wi:* corresponds to a plural subject, ‘they died’. Note in addition that the plural stem of ‘kill’ and ‘die’ in (9b) and (9d), i.e. *k^wi:*, also represents a case of a labile verb in which the same form is used in a causative and a non-causative function. The fact that the verbs ‘kill’ and ‘die’ have suppletive forms based on number distinctions in their verbal arguments can be interpreted as an additional evidence for their semantic correlation. On the other hand, suppletion may be an argument in favor of considering lexical causatives, that frequently have intransitive counterparts corresponding to their resulting events, to be double-event situations (see Velazquez in this volume). The existence of such suppletive stems in Cora in an interesting way highlights the fact that the patient is the one that receives the relevant number marking. In this sense, the patient of the lexical causative and the only argument of its intransitive counterpart both carry the same formal marking. However, we cannot conclude that verbal suppletion in Cora is a purely semantic phenomenon grounded on the category of patient from this parallelism in number marking between causees and patients, since in this language agents of intransitive verbs also mark number distinctions by means of suppletive forms. For instance, the verb in Cora for ‘to walk’ does show suppletive stems organized according to subject number: *ø-wá-rar:* (S3SG-CMP-walk.SGS.PAST ‘he walked’ versus *m^w-á-r-kʔh* (S3PL-CMP-walk.PLS.PAST) ‘they walked’. Therefore, verbal suppletion in Cora is rather a syntactic property that codes number distinctions for subjects of intransitives and objects of transitives.

Finally, in (9e) and (9f), we have anaphoric versions of the lexical causatives which show that the causee of lexical causatives is encoded as the object since it is cross-referenced in the verb by an object prefix. Other lexical causatives with suppletive forms which have non-agentive intransitive counterparts are: *ha-u-héʔika*

(LOC inside-CMP-kill) ‘blew out (a candle)’, *ha-u-míʔi* (LOC inside-CMP-die) ‘(The candle) went out’. Weak suppletive forms: *há-u-ya;ʒa-kaʔa* (water-CMP-boil-PAST) ‘boiled (the water)’, *há-u-ye;ʒiʔiwa-kaʔa*¹⁰ (water-CMP-boil-PAST) ‘(the water) boiled’. These few pairs cover a range of different semantic domains of change of state verbs.

A different formal and semantic type of suppletive alternation is attested with a lexical pair whose non-causative member is an ingestive verb. This is the case of the verbal pair *tíʔi-kʷa* ‘to eat corn products’ and *ti-mí* ‘to feed someone, to feed domestic animals’ or ‘to make someone eat’. Interestingly, this lexical causative conveys both benefactive and causative meanings. The first illustrated in (10b), means to give food to someone, and the second shown in (10c), means to force someone to eat something that he is not willing to eat.

(10) Suppletive alternations with non-causative ingestive verb counterparts

- a. *í Juan hám^wéʔi pu tíʔ-u-kʷa*
 DET John tortillas s3SG DEF OBJ-CMP-eat
 ‘As for John, he ate tortillas.’
- b. *ne-ra-i-mí í Joel í tem^wáh*
 s1SG-PO3SG-CMP-feed DET Joel DET tamales
 ‘I fed him, Joel with tamales.’
 ‘I gave Joel tamales to eat.’
- c. *kuʔukúri pu n-a-mí*
 chili s3SG PO1SG-CMP-feed
 ‘He made me eat chili.’

This verbal pair is also revealing from a syntactic point of view, since it tells us that the causee in lexical causatives which imply double object constructions takes precedence over the original object of the transitive counterpart for marking on the verb. We can see, for example, that in (10c) the animate causee which corresponds to a first person singular is encoded as object in the verb form. This object encoding device is typical of primary object languages (Dryer 1986), such as is the case of Cora.¹¹ For these reasons, I use the abbreviation (PO) in the gloss of object prefixes. I will come back to this topic in Section 3.2.4. that deals with morphological causatives derived from two-valency verbs. The lexical pair *tíʔi-kʷa* ‘to eat corn products’ and *ti-mí* ‘to feed someone’ or ‘to make someone eat something’ is the only one in my corpus that shows a lexical causative with an ingestive verb counterpart.

Suppletive forms in Cora represent the maximal expression of lexical causatives, in Comrie’s terms “the ideal lexical type” (Comrie 1989:170), since by definition suppletion forms are different verb roots that have no morphological resemblance and no formal relationship (Comrie 1989:168).

Another way of expressing lexical causatives in Cora is with ambitransitive verbs, also known in the literature as labile alternants,¹² a construction that is intermediate between the ideal lexical suppletive type and the ideal morphological type (Comrie 1989: 170). According to Dixon (2000: 4 and 72) ambitransitive verbs (also labile) occur in either intransitive or transitive clauses. All the ‘break’ verbs in Cora are non-agentive ambitransitive verbs of type S = O.¹³ One instance of this semantic verb class is shown in (11a) and (11b) in which the form *wá-tap^{wa}* is exactly the same for the causative and the non-causative verbs. Obviously, ambitransitive verbs do show distinctive features that allow us to distinguish the causative from the non-causative construction; unexceptionally the number of participants helps to do this job, and in some cases the aspect marking complex differentiates both constructions. An important remark about ambitransitive verbs is that there is no way to segment off a possible causative suffix. They represent clear instances of monomorphemic verbs. Labile pairs are very unusual in Cora, they are severely restricted to one semantic class, the ‘break’ verbs family, probably this is connected with the fact that this language has a very rich morphology and, as I will show later on, tends to expand the use of this formal device. The last example of this set, (11c), shows that the causee of a non-agentive ambitransitive is coded as object.

(11) Non-agentive ambitransitives of the type S = O

- a. *í Joel sáʔari pu wá-tap^{wa}*
 DET Joel pot s3SG CMP-break
 ‘As for Joel, he broke the pot.’
- b. *í sáʔari ø-wá-tap^{wa}*
 DET pot s3SG-CMP-break
 ‘As for the pot, it broke.’
- c. *ne-rá-i-tap^{wa}*
 s1SG-PO3SG-CMP-break
 ‘I broke it.’

Other non-agentive ambitransitives verbs of the type S = O are: *hantánaʔaka-kaʔa* (smash, shatter-PAST) ‘shattered (a farmyard)’ ‘to be shattered’; *wa-síuhʒaʔan* (CMP-tear) ‘tore (a shirt)’ ‘(the shirt) tore’.

Finally, (12a) shows another intermediate lexical causative which comes close to being a morphological type because the form *tí-hasʒehte* has a trace of the morphological causative *-te* suffix. However, notice that the causative verb has no phonological or morphological resemblance to the non-causative verb *tí-n,íʔuka-kaʔa* shown in (12b). For this reason, it still represents an instance of a lexical causative, a very hybrid type that combines a suppletive form with an ending that is difficult to analyze on convincing synchronic grounds. One final remark, the lexical causative in (12a) without the *-te* ending is not a possible verb form in the

language. Hybrid suppletive forms such as *tí-ha:sɛhte* ‘make someone angry’ suggest that there is a continuum with regard to the occurrence of the suffix *-te*, from a more productive pattern in which both the basic verb and the derived causative verb are still lexemes in the language, to a more frozen pattern in which non-*te* counterparts are unattested. This intermediate way of expressing a lexical causative is also very rare in Cora. As usual, the anaphoric version in (12c) shows that the causee is encoded as object.

(12) Hybrid suppletive forms

- a. *í Pédro Joel pu tí-ha:sɛhte*
 DET Peter Joel s3SG OBJ¹⁴-make angry
 ‘As for Peter, he made Joel angry.’
- b. *í Joel ø-ti-n,íʔuka-kaʔa*
 DET Joel s3SG-OBJ-to be angry-PAST
 ‘As for Joel, he got angry.’
- c. *ne-rá-ʔ-há:sɛhte*
 s1SG-PO3SG-CMP-make angry
 ‘I made him angry.’

Other causative and non-causative verbs with hybrid suppletive forms are: *wa-úʔste* (CMP-make cry) ‘made someone cry’, *gó-uh-yeine-kaʔa* (SRFL3SG-CMP-cry-PAST) ‘he cried’. The hybrid suppletive type covers the semantic domain of change of state verbs with stative and non-agentive intransitive counterparts. In this sense, it is closely related to the suppletive type discussed in (9).

Lexical causatives cover a wide range of verb bases, formally and semantically. They are paired with two-place state predicates, non-agentive intransitives, and also with ingestive verbs. However, they show some clear semantic correlations. Probably, the most interesting finding is that non-agentive ambitransitive verbs are mostly attested in the semantic class of ‘break’ verbs. This is the first piece of evidence for claiming that a formal device is also semantically restricted. Lexical causatives are analyzed as single verbs and mono-clausal constructions with a high degree of ‘compactness’¹⁵ and implicative force that are located at the top of the manipulative/binding hierarchy as it has been proposed in Givón (1980).¹⁶

3. Morphological causatives

Cora is a language that has several suffixes which may convey a causative meaning: *-ta*, *-re*, and *-te*¹⁷ are the more frequent markers and the less frequent are *-ra* and *-ʔiʔi-riʔi*. A language with such a rich morphology for creating causative situations requires a detailed analysis in order to state the main formal and semantic param-

eters involved in the selection of each one of these suffixes by a certain verbal class. In this line of research, morphological causativity with its wide range of formal devices and semantic classes represents a crucial field for exploring the complex interplay between morphology and semantics in Cora.

I will discuss first cases of non-directed alternations between the inchoative and causative meanings¹⁸ of labile verbs produced by an inchoative derivation from a basic stative verb. However, I will show in Section 3.1.1.3 that in some particular cases inchoative derivations may have an exclusive causative meaning in specific pragmatic settings. Most of the cases of non-directed alternations in Cora are located within the semantic domain of property concepts, in other words, adjectival meanings which in this language are formally expressed as stative verbs. In considering morphological causatives in Cora, we now turn to the inchoative/causative alternation that uses the *-re*, *-ta* and *-te* suffixes in stative verbs with adjectival meaning.

3.1 Non-directed formal categories: the inchoative/causative verb alternations in stative verbs with adjectival meaning

3.1.1 *The case of the -re suffix*

3.1.1.1 *Inchoative derivation that produces labile verbs.* Stative verbs for property concepts that belong to various semantic classes such as color, taste, sense of touch or that express physical properties¹⁹ frequently derive an inchoative verb by means of the *-re* suffix.²⁰ The derived inchoative verb behaves as a labile verb which is usable either as intransitive-inchoative or as transitive-causative. In Cora, the members of these semantic groups are basically conceptualized as properties that are assigned to inanimate entities.²¹ This is probably the common feature that is shared by all these property concepts and that defines them as one semantic class in the language. The semantics of *-re* when it has a causative use are mainly associated in the domain of direct causation with a change of state. The distribution suggested for this suffix, i.e. inanimates only, is strengthened by the fact that many aspects of Cora grammar focus on the inanimate-animate distinction. For instance, nouns differ in the way they mark plural number according to this semantic distinction. Thus, in many cases animate nouns bear *-te* suffix for marking plural number, like *nawá?ari-te* ‘thieves’, whereas inanimate nouns are not allowed to take this suffix and mark their plurals with *tí?i-* prefix, exclusively in possessive or verbal constructions, such as *tí?i-ne-kanari* (PL-POSS1SG-guitar) ‘my guitars’.²² Further evidence supporting this analysis will be presented at the end of this section.

The set of examples given in (13) shows inchoative derivation when a stative base of the semantic class described above takes the *-re* suffix in a derivational process. On the other hand, these examples illustrate that once the inchoative verb is

derived, it can behave as a labile verb that is used either as an intransitive verb with an inchoative meaning or as a transitive verb with a causative meaning.

(13) Inchoative derivation with the *-re* suffix that produces labile verbs

- a. *í hámw eʔi t,íʔi-ʒeʔi*
 DET tortilla PL-hard
 ‘The tortillas are hard.’
- b. *í hámw eʔi t,íʔ-u-ʒeʔi-re-kaʔa*
 DET tortilla PL-CMP-hard-INCH-PAST
 ‘The tortillas got hard.’
- c. *í sɨká hámw eʔi pú t,íʔ-u-ʒeʔi-re*
 DET sun tortilla S3SG PL-CMP-hard-INCH
 ‘As for the sun, it hardened the tortillas.’
- d. *∅-t,íʔ-u-ʒeʔi-re*
 S3SG-PL-CMP-hard-INCH
 ‘It (the sun) hardened them (the tortillas).’
- e. *∅-ra-:-té-ʒeʔi-re*
 S3SG-PO3SG-CMP-PERF-hard-INCH
 ‘It (the sun) hardened it (the tortilla).’

In (13a) we have a predicative construction with the stative verb *ʒeʔi* ‘to be hard’. Notice that the property concept does not need any kind of extra marking, such as a verbal copula in order to be predicated.²³ This is the main evidence for classifying property concepts in Cora as stative verbs. In (13b) the inchoative construction, *í hámw eʔi t,íʔ-u-ʒeʔi-re-kaʔa* (DET tortilla PL-CMP-hard-INCH-PAST) ‘The tortillas got hard’, expresses a more dynamic situation by means of the *-re* suffix. This new situation presents a change of state that occurs spontaneously without the participation of an external causer. In contrast, (13c) *í sɨká hámw eʔi pú t,íʔ-u-ʒeʔi-re* (DET sun tortilla S3SG PL-CMP-hard-INCH) ‘As for the sun, it hardened the tortillas’ expresses a causative construction because it presents the dynamic situation of a change of state as a result of a causing entity which in this case is *í sɨká* ‘the sun’. The inchoative/causative verb alternation is expressed by means of exactly the same verb, and for this reason, it represents a case of a labile verb. In most of these cases, the aspect affix marking is responsible for the distinction between both constructions. For instance, the verb with inchoative meaning in (13b) takes the *-kaʔa* suffix to express the imperfective past, typically used in stative bases, whereas the verb with causative meaning is not allowed to take this suffix, and expresses a perfective punctual past by means of a completive *u-* prefix, such as (13c) and (13d), or through both a completive and a perfective prefix, as in (13e).

Concerning subject marking in this set of examples, note that the single argument of the inchoative construction in (13b) is marked by the prefix *t,íʔi-* which signals plural inanimate entities. It is important to make clear that subject personal clitics are not allowed in the inchoative construction, even in cases in which the single participant is a singular inanimate entity. Thus, a construction like **hámm^weʔi pú wa-té-ʔeʔi-re-kaʔa* (DET tortilla S3SG CMP-hard-INCH-PAST) ‘The tortilla got hard’ is considered ungrammatical.²⁴ In contrast, the causative construction in (13c) that bears an inanimate entity as subject of the clause, *í síká* ‘the sun’, does take a personal subject marking, the clitic *pú*. This suggests that the use of personal subject markers is also related to the transitivity of the clause. Thus, if an inanimate entity is presented as an acting force with some agent features, it is licensed to take personal subject marking.

Causee marking is also very particular in this set of examples: (13d) *ø-t,íʔ-u-ʔeʔi-re* (S3SG-PL-CMP-hard-INCH) ‘It (the sun) hardened them’, shows that plural inanimate causees need to be cross-referenced on the verb by *t,íʔi-* prefix. Interestingly, singular inanimate causees are allowed to take an object prefix. For this reason, the prefix *ra-* of third person singular shows up in (13e) *ø-ra-r-té-ʔeʔi-re* (S3SG-PO3SG-CMP-PERF-hard-INCH) ‘It (the sun) hardened it (the tortilla)’. Thus, the inanimate-animate distinction is merged into one single marking for singular objects or causees. All these facts suggest that the use of personal subject and object markers is an intricate interplay among the parameters of animacy, transitivity and grammatical number. On the other hand, these facts add further evidence to the hypothesis that many aspects of Cora grammar focus on the semantic division between animate and inanimate entities.

Other stative verbs with adjectival meaning which undergo an inchoative derivation with the *-re* suffix thus producing labile verbs are the following: from the taste semantic class, *kaká* ‘to be sweet’; from the physical property class, *č^wém^wa* ‘to be dirty’, *beʔé* ‘to be big’, *tít^ʔi* ‘to be long’; from the color class, *k^wéim^a* ‘to be white’, *t,áum^wa* ‘to be yellow’, *sú^ʔum^wa* ‘to be black’, and *páʔu* ‘to be red’. The semantic class for taste is strictly restricted to inanimate entities, some verbs of the physical property class accept to be assigned to both inanimate and animate entities, and finally the semantic class of colors is highly flexible, all of its members can be attributed to animate entities. This means that when the derived verb has causative meaning we have only inanimate causees in verbs that correspond to the taste and touch class. In the case of physical properties, the causative verb can take both inanimate and animate causees.

A piece of evidence that strengthens the analysis that the distribution of the *-re* suffix depends on the semantic distinction between animate and inanimate entities is the existence of a formal strategy for making a shift in semantic category. This can be seen in (14) where the *-raʔa* suffix occurs obligatorily when stative verbs basically assigned to inanimates are attributed to animate entities.

(14) Shift in semantic category marked by the *-raʔa* suffix

- a. í kúsuri ø-čém^wa
 DET cloth s3SG-dirty
 ‘As for the cloth, it is dirty.’
- b. í páʔarɪh ø-čém^wa-raʔa
 DET child s3SG-dirty-CSHIFT
 ‘As for the child, he is dirty.’
- c. í kúsuri ø-k^wéina
 DET cloth s3SG-white
 ‘As for the cloth, it is white.’
- d. í páʔarɪh ø-k^wéina-raʔa
 DET child s3SG-white-CSHIFT
 ‘As for the child, he is blond.’
- e. í hám^weʔi tíʔi-peʔestí
 DET tortillas PL-wet
 ‘The tortillas are wet.’
- f. í páʔarɪh ø-peʔeh-čí-raʔa
 DET child s3SG-wet-ANI-CSHIFT
 ‘As for the child, he is wet.’

Thus, in order to attribute properties typical of inanimates to animates, it is necessary to have a category-changing apparatus. Note that in most cases, this category semantic shift is carried out exclusively by the *-raʔa* suffix. The nature of this special marker is unclear. It does not seem to mark inflectional features; it is rather a derivational morpheme that adds some sort of agency, or dynamic features to the bare stative base. The next set of examples shows that this suffix in combination with another *-ra* suffix conveys total affectedness of the inanimate or the animate entity to which is attributed the stative base *kɪm^wáh* ‘to be cold’.

(15) Total affectedness conveyed by the *-raʔa* suffix

- a. na-m^wá kɪm^wáh-ra
 POSS1SG-hands cold-PART
 ‘My hands are cold.’
- b. ø-úh-kɪm^wáh-ra í sáʔari
 s3SG-LOC.inside-cold DET pot
 ‘The bottom of the pot is cold.’
- c. í páʔarɪh ø-kɪm^wáh-ra-raʔa
 DET child s3SG-cold-PART-WHOLE
 ‘As for the child, he is cold.’ (the whole body)

- d. í sáʔari ø-kɪm^wáh-ra-raʔa
 DET pot s3SG-cold-PART-WHOLE
 ‘As for the whole pot, it is cold.’ (the whole pot)

In (15a) and (15b) a single *-ra* suffix attached to the stative base indicates that the child and the pot are only partially affected by the quality of being cold, whereas in (15c) and (15d) the suffix complex *-ra-raʔa* expresses that the entities are completely affected by this quality. Out of 40 stative bases, only *kɪm^wáh* ‘to be cold’ presents this use of *-raʔa* suffix. Therefore, this use of the suffix is rather idiosyncratic and represents additional evidence in favor of the deep derivational nature of this morpheme.

3.1.1.2 Equipollent alternations of inchoative and causative derivation by means of *-re* and *-te* suffixes respectively. An equipollent alternation in the terms of Haspelmath (1993:91) appears when both the inchoative and the causative verb are derived from the same stem by means of different affixes. In Cora, this type of alternation takes the *-re* suffix for deriving the inchoative verb of a stative verb that corresponds to the semantic class of color, taste, sense of touch, physical property, in other words, the semantic class of *core adjectival concepts* defined in the previous section. In contrast, the causative verb is derived by means of *-te* suffix, the most genuine causative suffix that Cora has. Since we have already extensively discussed a case of an inchoative/causative alternation with an inanimate patient, this time I will present an equipollent alternation involving an animate patient. This will allow us to observe the differences in argument marking. See the set of examples in (16).

(16) Equipollent alternations

- a. í páʔarɪh ø-kɪm^wáh-ra-raʔa
 DET child s3SG-cold-PART-WHOLE
 ‘As for the child, he is cold.’ (the whole body)
- b. n-a:té-kɪm^wah-re-kaʔa
 s1SG-CMP-PERF-cold-INCH-PAST
 ‘I got cold.’
- c. í hié:lo pú n-a:té-kɪm^wah-te
 DET frost s3SG PO1SG-CMP-PERF-cold-CAUS
 ‘As for the frost, it made me cold.’
- d. ø-n-a:té-kɪm^wah-te
 s3SG-PO1SG-CMP-PERF-cold-CAUS
 ‘(The frost) It made me cold.’

As usual, in (16a) figures the stative verb *kɪm^wáh* ‘to be cold’ from which the inchoative and the causative verbs are derived. In (16b) we have the inchoative verb

derivation by means of the *-re* suffix. This situation is presented as occurring spontaneously without the intervention of an external agent, and it takes all the expected aspect markers that we have discussed so far for inchoative constructions. The new fact is the personal argument marking that bears the entity that experiences the change of state. Notice the presence of first singular subject prefix *n-* in (16b) *n-a-té-kim^wah-re-ka?a* (S1SG-CMP-PERF-cold-INCH-PAST) ‘I got cold’. Given the fact that this entity is a human being, it can take a personal subject mark. This marking was presumably impossible in the case of (13b) *í há^weʔi t, iʔi-u-ʔeʔi-re-ka?a* (DET tortilla PL-CMP-hard-INCH-PAST) ‘The tortillas got hard’ because in this inchoative construction, the argument that underwent the change of state was inanimate. This different type of subject marking in stative and inchoative constructions depending on the animacy parameter is one of the most relevant formal features that divides stative bases from regular intransitives. Since the latter class is not usually accompanied by inanimate subjects, it does not show the formal split for subject marking either.

In (16c) *í hié:lo pú n-a-té-kim^wah-te* (DET frost S3SG PO1SG-CMP-PERF-cold-CAUS) ‘As for the frost, it made me cold’, we have the causative construction that presents the situation as a result of an external agent. The new verb is derived by means of a *bona fide* causative suffix, the *-te* suffix. As expected, the pronominal version of the causative construction shows that the animate causee is encoded as object, note in (16d) the object prefix *n-*.

There are very few cases of equipollent alternations within the stative verbs of property concepts assigned basically to inanimate entities. Besides the case of *kim^wáh* ‘to be cold’, I only found one other verb: *hán-ʔina* ‘to be bitter’.

3.1.1.3 Inchoative derivation that has only causative use. The fact that some property concepts of the semantic class described above show flexibility in their assignment to animate entities may have crucial consequences in the use of the derived inchoative verb. The most relevant one is the appearance of a derived inchoative verb through the *-re* suffix that has an exclusively causative and transitive use, as can be seen in (17).

- (17) Inchoative derivation by means of the *-re* suffix with an exclusive causative use

- a. *í súʔum^wabiʔika me-súʔum^wa*
 DET jew s3PL-black
 ‘As for the “jew,” they are black.’ (lit. The black ones are black)
- b. *í súʔum^wabiʔika ø-wa-t,ia-u-súʔum^wa-re*
 DET jew S3SG-CMP-PERF-RFL3SG-black-INCH
 ‘As for the “jew,” he blackened himself.’

- c. \emptyset -wa-t,iá-u-suʔum^wa-re
 s3SG-CMP-PERF-RFL3SG-black-INCH
 ‘He blackened himself.’
- d. í Joel súʔum^wabiʔika pu wa-t,ia-súʔum^wa-re
 DET Joel jew s3SG CMP-PERF-black-INCH
 ‘As for Joel, he blackened the “jews.”’
- e. \emptyset -góʔ-u-súʔum^wa-re
 s3SG-PO3PL-CMP-black-INCH
 ‘He blackened them.’

Again, in (17a) we have the predicative construction with the stative verb *súʔum^wa* ‘to be black’. In this case personal subject marking is completely transparent because we are dealing with a plural animate entity that is marked through a visible subject prefix, *me-* of third person plural. The rest of the clauses in this set of examples presents a more dynamic situation derived by means of the *-re* suffix. The derived verb *súʔum^wa-re* ‘blacken’ is also semantically derived in a very strong way since it carries additional meaning elements that are lacking in the basic stative verb. The Cora verb *súʔum^wa-re* ‘blacken’ means ‘to paint oneself black’ or ‘to paint someone else black’. It is used to designate one of the most relevant rituals that Cora people carry out during Holy Week. For this ritual ceremony, some of the Coras are chosen to play the role of “the jews.” This role consists of painting oneself black on Holy Thursday. On this day, one beholds what is called “the erasing” of the jews. This ritual practice signifies that, by painting their bodies and faces black, the jews hide their true identities and cease to be what they are. Through this ritual practice, the jews develop a metamorphosis that makes them different from the other members of the community.²⁵ At the same time, on Holy Saturday in an atmosphere full of fun and jokes, “the jews” may blacken the spectators of the ritual ceremony. The action of blackening other people is performed by entering into direct contact with the other participants, either by hugging them tightly or by smearing them with black pigment. Thus, the derived verb *súʔum^wa-re* expresses indeed a change of state. Moreover, it is a ritual metamorphosis which turns human beings into some kind of monstrous creatures. But this change of state is not expected to occur objectively or conceptually in a spontaneous way. It requires instead obligatorily strong conditions of direct causation in a relevant ritual setting in which human agents deliberately paint themselves black or smear another person with black pigment. This explains why the clauses in (17b), (17c), (17d) and (17e) show only causative constructions that require necessarily the participation of an external agent. In (17b) and (17c) *í súʔum^wabiʔika wa-t,ia-u-suʔum^wa-re* (DET jew CMP-PERF-RFL3SG-black-INCH) ‘The “jew” blackened himself’, we have a reflexive construction in which the agent acts upon himself. In this case, the zero marking of the subject and the reflexive marker *u-* which codes the causee

are coreferential. Notice also that there is no past suffix *-kaʔa* typical of stative-inchoatives. This represents additional evidence for the causative-transitive status of the clauses in (17b) and (17c). In (17d) and (17e) we have the anaphoric version of the causative construction in which the causer is encoded as subject and the causee as object. Given the highly specific and cultural meaning associated with the verb *súʔum^wa-re* and the fact that its use obligatorily requires the relevant situation of strong direct causation, this verb cannot be used with an inchoative sense, as people will not blacken spontaneously in the ritual setting of the Holy Week. The exclusive causative use of this verb is an interesting case in which highly specific semantics and obligatorily pragmatic settings rule out possible grammatical outputs.

The stative verb *súʔum^wa* ‘to be black’ does present an inchoative derivation as well in which both the inchoative and the causative use are permitted. When we have a clear case of a labile verb, the derived meaning is clearly compositional. On the other hand, the derived verb accepts both inanimate and animate causees. This derivation is shown in (18).

(18) Inchoative and causative uses of the stative verb *súʔum^wa* ‘to be black’

- a. *í yáuhka* \emptyset -wa-té-súʔum^wa-re-kaʔa
 DET avocado s3SG-CMP-PERF-black-INCH-PAST
 ‘As for the avocado, it turned black.’
- b. *í sɨká yáuhka pú wa-té-súʔum^wa-re*
 DET sun avocado s3SG CMP-PERF-black-INCH
 ‘As for the sun, it blackened the avocado.’
- c. *í Veronica* \emptyset -wa-té-súʔum^wa-re-kaʔa
 DET Veronica s3SG-CMP-PERF-black-INCH-PAST
 ‘As for Veronica, she got black.’ (turned brown)
- d. *í sɨká Veronica pú wa-té-súʔum^wa-re*
 DET sun Veronica s3SG CMP-PERF-black-INCH
 ‘As for the sun, it blackened Veronica.’

As opposed to the set of examples in (17), the constructions in (18a) and (18c) express a change of state that occurs spontaneously without the participation of an external causer and which do exhibit the inchoative use of the verb. The verbal complex takes the usual aspect marking for inchoatives. In this situation both an inanimate subject, *í yáuhka* ‘the avocado’, and an animate subject, *í Veronica*, undergo the change of state. The stative verb *č^wém^wa* ‘to be dirty’ behaves also like *súʔum^wa* ‘to be black’. It permits an inchoative derivation which may have an exclusively causative use which involves only agentive participants and which can bear both a reflexive causee and an object causee.

Given all the semantic features and in some cases even the pragmatic settings that are associated with this kind of inchoative derivation in Cora, it is not surprising that this derivation is not highly generalized lexically. In this sense, it is a deep derivational process which shows an interesting interplay among pragmatics, semantics and grammar. Above all what this derivational process tells us is that the role played by the animate or inanimate status of the participants involved in the inchoative and causative situation is crucial. This conclusion coincides with Givón's claim (1976: 342) when he states that "Lexical causativization is thus shown not to be a mere syntactic operation producing more convenient, shorter surface structures. Rather, it is highly sensitive to the animacy of the underlying subject (object of [cause]) as well as to the embryonic case properties inherent in the verb—even when those do not show up on the surface of the various nominals associated with that verb."

3.1.2 *The case of the -ta suffix*

I consider it unnecessary to make an extensive presentation of the use of the *-ta* suffix. I would just like to explain briefly some of the most relevant features exhibited by stative verbs with adjectival meaning which take *-ta* to derive an inchoative-causative alternation. First of all, the verbal word formation with *-ta* is also a non-directed derivation that conveys the meaning of a change of state in the domain of direct causation. Unlike *-re*, in the case of *-ta*, I found lots of instances of equipollent alternations in which the inchoative is derived with *-ta* or with the suffix complex *-ta-re*, and the causative unexceptionally takes the *-te* suffix. As a result, there are fewer cases of labile verbs with *-ta*. The semantic class of property concepts that take this suffix includes qualities assigned to human beings in particular, and to animate entities in general. It represents the semantic mirror image of the semantic class covered by the *-re* suffixation. Some of the stative verbs with adjectival meaning that are basically conceptualized as properties assigned to human beings are: *pú?u* 'to be fat', *m^wá?akan* 'to be tame', *?ukarí-sta-re* 'to get old (for women)', *bástakíra?i-ta-re* 'to get old (for men)', *kílien* 'to be little'.

Surprisingly, some stative verbs with adjectival meaning that are usually conceptualized as properties assigned to inanimate entities also take *-ta*. This irregularity is probably due to euphony, because all these stative verbs have a *-ti* ending, such as *pístí* 'to be hot', *k^wa?atí* 'to be soft, or tender', *pe?estí* 'to be wet'.

In general, stative verbs representing concepts of property that are attributed to animate entities do not allow a shift in semantic category. They remain in the original semantic class. There is only one exception, the stative verb *kílien* 'to be little' that, contrary to the expectations, when it undergoes an inchoative derivation that produces a labile verb is attributed exclusively to inanimate entities and acquires the sense of 'shorten'.

Examples of labile verbs by means of the *-ta* suffix are given in (19), and cases of equipollent alternations figure in (20).

- (19) Inchoative derivation with the *-ta-re* suffix complex that produces a labile verb
- a. í Joel \emptyset -wa-té-bastakɪraʔi-ta-re-kaʔa
 DET Joel s3SG-CMP-PERF-old-INCH-INCH-PAST
 ‘As for Joel, he got old.’
- b. í kʷíʔiniʔi-raʔa Joel pu wa-té-bastakɪraʔi-ta-re
 DET to be ill-NR Joel s3SG CMP-PERF-old-INCH-INCH
 ‘As for the illness, it made Joel old.’
- (20) Equipollent alternations by means of the *-ta* and *-te* suffixes
- a. í čínɯ \emptyset -wa-té-puʔ-ta-kaʔa
 DET pig s3SG-CMP-PERF-fat-INCH-PAST
 ‘As for the pig, it got fat.’
- b. í Alberto čínɯ pu wa-té-puh-te
 DET Albert pig s3SG CMP-PERF-fat-CAUS
 ‘As for Albert, he fattened the pig.’

In the case of *-ta*, I could not find an example of an inchoative derivation in which this suffix would have only a causative reading. What represents an exclusive property of this suffix is its capacity to be attached to noun bases for deriving verbal forms. In these cases, the verbal word formation may be intransitive or transitive, but from my point of view it is not causative. For this reason, I analyze *-ta* as a verbalizer when it is attached to noun bases.²⁶ A relevant example of this use of the *-ta* suffix is: *sú-ta* ‘to bloom’ from *súsuʔu* ‘flower’. This example is given in (21a).

- (21) Verbs derived from noun bases by means of the *-ta* suffix
- a. í wastá-ri \emptyset -wa-sú-ta (from *súsuʔu* ‘flower’)
 DET to seed-NR s3SG-CMP-flower-VR
 ‘As for the plant, it bloomed.’
- b. í bíte wastá-ri pu wa-ta-sú-taʔih-te
 DET rain to seed-NR s3SG CMP-PERF-flower-VR-CAUS
 ‘As for the rain, it made the plant bloom.’

Notice that the causative counterpart of the new verb in (21b) is derived by means of the *-te* suffix, although the whole verbal form shows a more complex phonological shape. For this reason, the set of examples in (21) may also be interpreted as a case of an equipollent alternation.

3.2 Directed formal categories

3.2.1 Causative derivation from noun stems

Unlike *-ta*, which functions as a simple verbalizer when attached to noun stems, *-ra* and *-te* operate instead as clear causative markers when suffixed to nominal bases. This derivational process is a case of a directed formal strategy in which the derived verb is exclusively a transitive-causative verb. This type of causative formation is illustrated in (22). The example is particularly interesting because it shows a relevant contrast between direct and indirect physical causation.

(22) Causative derivation from nominal stems by means of the *-ra* suffix

- a. í bířiraʔa ø-wa-t,ía-ta:sin
 DET corn field s3SG-CMP-PERF-burn-FUT
 ‘As for the corn field, it is going to get burn.’
- b. hí Alberto bířiraʔa pu wa-t,ía-tai-ra
 DET Albert corn field s3SG CMP-PERF-fire-CAUS
 ‘As for Albert, he is going to burn (put fire) the corn field.’
- c. í múhme úh-ta:sin
 DET beans LOC.inside-burn-FUT
 ‘The beans are going to get burn.’
- d. í Maria múhme pu uh-tái-ra
 DET Mary beans s3SG LOC.inside-fire-CAUS
 ‘As for Mary, she is going to burn the beans.’

In (22b) the verb *wa-t,ía-tai-ra* expresses a more direct causation which implies that the causer physically puts fire to the corn field, whereas in (22d) the verb *uh-tái-ra* conveys a less direct causation which implies that the causer lets the beans get burned by leaving them in contact with the fire on the stove. Noun stems frequently derive morphological causatives through *-te* suffixation, such as *ø-r-a-u-tá-huka-te* (S3SG-PO3SG-LOC-LOC-PERF-stomach-CAUS) ‘He got her pregnant’, but this type of causativization process is not covered in this paper.

3.2.2 Causative derivation from non-agentive intransitive verbs

Another case of a very transparent directed derivation is observed when non-agentive intransitive verbs produce morphological causatives by means of the *-te* suffix. The term non-agentive refers mainly to an experiencer subject who does not show properties of either volition or intention. It refers to a participant who lacks the typical criteria for the notion of “agent.”²⁷ This participant undergoes the change of state or the going-on situation without being able to exercise control over the situation. This terminological clarification is relevant because in the causative literature, the term non-agentive can be used to refer to inanimate participants.

This is not the case in the present paper. I prefer to keep the term inanimate for entities that clearly show no features of animacy. As I have shown in previous sections, this conceptual distinction is crucial in Cora. Remember that the inanimate status of a participant has important consequences in the derivational process, and for this reason exhibits different argument marking and takes the suffix *-re* for deriving a morphological causative. Thus, I would rather use the term non-agentive to refer to experiencer subjects that do show animacy features but lack agentive properties. The fact that in Cora, non-agentive subjects are conceptualized differently from inanimate entities has clear formal correlations in the morphological process of causativization. One piece of evidence for this is that non-agentive subjects produce morphological causatives by means of the *-te* suffix exclusively. Observe the set of examples in (23).

(23) Causative derivation from non-agentive intransitive verbs

- a. *í páʔarɨh ø-wá-kuh*
 DET child s3SG-CMP-sleep
 ‘As for the child, he slept.’
- b. *í Maria páʔarɨh pu wa-tá-kuʔu-ste*
 DET Mary child s3SG CMP-PERF-sleep-CAUS
 ‘As for Mary, she put the child to sleep.’
- c. *ne-ra-ʔ-tá-ku-ste*
 s1SG-PO3SG-CMP-PERF-sleep-CAUS
 ‘I put him to sleep.’

In (23a) we have a spontaneous situation in which the personal subject argument does not have any control over this situation. In (23b) I present the corresponding causative derivation of this situation in which a clear volitional and external agent acts upon the non-agentive participant, and as a result of this action, the participant undergoes the caused event. As you may have already noticed, morphological causatives in Cora specify the caused or the resulting event only. They do not express explicitly the different ways in which the causing event, or the action of the external agent, is carried out in order to get the resulting event.²⁸ An extreme case of such a way of focusing the two events involved in a causative situation is that of (17d) *í Joel súʔumʷabiʔika pu wa-t,ia-súʔumʷa-re* (DET Joel jew S3SG CMP-PERF-black-INCH) ‘As for Joel, he blackened the “jews.”’ In this example, the causative derived verb only gives information about the resulting event, ‘blackened’. It is impossible to infer the way in which this resulting event was reached, in other words, painting oneself black.

The encoding of the causee in morphological causatives derived from non-agentive intransitive verbs proceeds straightforwardly. As usual it is encoded by an object prefix. This is shown in (23c).

An interesting case of a derived morphological causative in non-agentive intransitive bases can be seen in (24).

- (24) Causative derivation from non-agentive intransitive verbs that show suppletive stems
- a. í Juan ø-wa-t,iáh-tawai
 DET John s3SG-CMP-PERF-get drunk.SGS
 ‘As for John, he got drunk.’
 - b. í súʔum^wabiʔika m^w-a-t,iá-taʔaroih
 DET jews s3PL-CMP-PERF-get drunk.PLS
 ‘As for the “jews,” they got drunk.’
 - c. í súʔum^wabiʔika Joel mu wa-t,iáh-tawai-te
 DET jews Joel s3PL CMP-PERF-get drunk.SGPO-CAUS
 ‘As for the “jews,” they got Joel drunk.’
 - d. í Joel súʔum^wabiʔika pu wa-t,iá-taʔaroih-te
 DET Joel jews s3SG CMP-PERF-get drunk.PLPO-CAUS
 ‘As for Joel, he got “the jews” drunk.’

This causative derivation allows us to observe the interaction between two morphological properties: verbal suppletion and morphological causativity. Remember the suppletive lexical pairs for ‘die’ and ‘kill’ discussed in (9). In Section 2, I noted that verbal suppletion in Cora is a syntactic property that codes number distinctions for subjects of intransitives and objects of transitives. Given these facts, we would expect that when non-agentive intransitive bases showing suppletive stems undergo a causative derivation, their derived causative counterparts will also exhibit suppletion. We would also expect that the derived verbs show suppletion in object number because causativization through *-te* suffix turned them into transitive verbs. This is exactly what happens in Cora, and this phenomenon represents evidence for the increase in valency typically associated with causativization. Notice that (24a) and (24b) show suppletive stems for singular and plural subject of the intransitive verb ‘to get drunk’. Thus, singular subjects take the stem *tawai*, whereas plural subjects are expressed by *taʔaroih*. When the verb ‘to get drunk’ undergoes causativization by means of the *-te* suffix, it takes the stem *tawai* for marking a singular object like in (24c), and the stem *taʔaroih* for marking a plural object as in (24d). Suppletion gives prominence to the number marking of the only argument of an intransitive verb and highlights the number marking of the second argument of a transitive verb which in derived causatives corresponds to causees.

I would like to add that morphological causatives derived from non-agentive intransitive bases accept the intervention of an inanimate causer well; such is the

case of *í kɨ:ʔi pu ra-i-kasté?ewa-te* (DET smoke S3SG PO3SG-CMP-cough-CAUS) ‘The smoke made him cough.’

Other non-agentive intransitive verbs that derive morphological causatives by means of the *-te* suffix are the following: *hí-ste* ‘to wake someone up’ from *híh* ‘to wake up’, *tí?i-wa-te?e* ‘to cure someone’ from *wa-rúh* ‘to get well’, *kasté?ewa-te* ‘make someone cough’ from *kastéwa* ‘to cough’, *hára?i-te* ‘to make someone vomit’ from *hára?a* ‘to vomit’, *na?aná-te* ‘to make someone laugh’ from *na?aná* ‘to laugh’, *tí?i-k^wi?in-te?e* ‘to cause illness in someone’ from *tí?i-k^wi?i* ‘to be ill’, *ha?ukáruh-te* ‘to sink something’ from *ha?ukárupih* ‘to sink’, *híhwah-te* ‘to make someone shout’ from *híhwa* ‘to shout’, *kuréhp^wa-te* ‘to make someone snore’ from *kuréhp^wa* ‘to snore’, *tɨm^wá?i-ra-ste* ‘to drive someone crazy, to make someone dizzy or seasick’ from *tɨtɨm^wa?i* ‘to be crazy, to be seasick’, *tém^wa?abi-ste* ‘to make someone happy’ from *tém^wa?abe* ‘to be happy’.²⁹ They represent a large and homogeneous semantic class that has a non-agentive subject, in other words, an experiencer who is unable to control the situation in which he is involved. This lack of control makes the experiencer more vulnerable to the action of external true agentive subjects. On the other hand, the verbs in this semantic class basically occur spontaneously, and for this reason, they show strong preference for directed causative derivation.³⁰ This verb class shares the semantic feature of occurring spontaneously with the class of stative verbs discussed in Section 3.1. According to Haspelmath (1993:93) this is due to the fact that all these verb classes lack agent-oriented meaning components.

Morphological causatives in Cora show a high degree of structural integration. They do not exhibit marking of a separation in time of the two events involved in the causative situation. The causee is not able to exercise volition/control/resistance. In these cases, Givón (1980:371) concludes that “Their syntactic/structural integration into a single clause/proposition form is thus a most natural reflection of that semantic reality.” For all these reasons and due to their high implicative force, morphological causatives derived from stative and non-agentive verbal bases in Cora are located at the top of the manipulative/binding hierarchy.

3.2.3 *Causativization devices in agentive intransitives and the causative/comitative split of the -te suffix in this verbal class*

Cora agentive intransitive verbs represent a sort of semantic limbo in which linguistic causativity cannot be expressed. On the one hand, a morphological causative can be derived from only two verbs in this class; on the other hand, few can be combined in periphrastic causatives with the verb *ta?áih* ‘to send’. Furthermore, *-te* suffixation in agentive intransitives has developed an applicative/comitative meaning in the subclass of deictic movement verbs. In this sense, the semantic nature of agentive intransitive verbs imposes such stringent re-

strictions on the formation of morphological causatives that it is here that the causative/comitative split arose.

There is only one agentive and basically intransitive verb that under very special circumstances allows *-te* suffixation with causative meaning. Such is the case of the verb *ráʔaraʔa* ‘to fly’ that can be causativized by *-te* only if the entity is an inanimate causee, for instance a mechanical toy. In this case, we can have the following construction:

(25) Causative meaning by *-te* suffixation in agentive intransitives

- a. *í áʒipoʔu ø-wa-ta-ráʔaraʔa*
 DET butterfly S3SG-CMP-PERF-fly
 ‘As for the butterfly, it flew.’
- b. *í Joel áʒipoʔu pú wa-ta-ráʔaraʔi-te*
 DET Joel butterfly S3SG CMP-PERF-fly-CAUS
 ‘As for Joel, he made the butterfly fly.’

Very few agentive intransitives can be embedded in a periphrastic causative with the verb *taʔáih* ‘to send’. The causer can give verbal instructions to the causee to induce him to perform activities, such as *wáhka* ‘to play’ or *ʔihwa*³¹ ‘to take a bath’. M. Shibatani (personal communication) suggests that Cora does not allow the majority of agentive intransitives to be embedded in a periphrastic causative with the verb *taʔáih* ‘to send’ because of the semantic requirements of this verb that imply some sort of benefactive or purposeful intent on the part of the causer. This purposeful intent, typical of benefactive causatives such as the Cora periphrastic causatives that I will discuss in Section 4, cannot be obtained easily from agentive intransitives since this verbal class does not involve an object transferable to the causer nor does it usually have an effect beneficial to him. For these reasons, the majority of Cora agentive intransitives are not attested in causative analytic constructions. Even in cases in which the causee is a child or a disadvantaged adult, the verb *mé* ‘to walk.SG.PRES’³² is not allowed in a periphrastic construction, what we get instead in this kind of situation is an assistive clause such as *í Joel Macario pú wa-tá-bah tɪ wá-yeʔi-beʔ-in* (DET Joel Macario S3SG CMP-PERF-help SBR3SG CMP-walk.SG-APPL-IRR) ‘As for Joel, he helped Macario walk’.

An interesting way of deriving a synthetic causative within the class of agentive intransitives is by turning an active transitive verb into an intransitive via the antipassive prefix *tíʔi-*. Note that in the following examples the *tíʔi-* prefix is used both as an antipassive and as a definite object marker. The first use, illustrated in (26a), denotes the generalized activity of the verb, whereas the latter use shown in (26b) indexes a clear definite cognate object. The constructions in which the derived causative verb *tíʔi-u-néʔih-te* (ANTIPASS-CMP-dance-CAUS) ‘to make dance’ is used to portray two kinds of situations; one refers to a sociative causative situa-

tion where the causer is involved, illustrated in (26c), and the other to a causative situation expressed in (26d). The sociative meaning is probably due to the fact that the verb ‘to dance’ in Cora, once it undergoes a valency-reducing derivation via an antipassive marker behaves as an active intransitive, so that one understands the sociative meaning typically conveyed by this verbal class. The causative reading is confirmed by both the impersonal causative construction in (26d) that does not express an overt causer, and by the periphrastic causative in (26e) that syntactically separates the agentive causer from the agentive causee, and that shows marking in time separation of the two events involved in this indirect causative construction. All these considerations can be seen in the set of examples given in (26).

(26) Causative derivation via an antipassive marker

- a. í Isabel ø-tíʔ-u-néih í fiesta
 DET Isabel s3SG-ANTIPASS-CMP-dance DET party
 ‘As for Isabel, she danced at the party.’
- b. í Joel kúmbia pu tíʔ-u-néih
 DET Joel cumbia s3SG DEFOBJ-CMP-dance
 ‘As for Joel, he danced the cumbia.’
- c. í Diego Isabel pu tíʔ-u-néih-te
 DET Diego Isabel s3SG ANTIPASS-CMP-dance-CAUS
 ‘As for Diego, he made Isabel dance (with him).’ (sociative causative)
- d. Isabel mu tíʔ-u-néih-te í fiesta
 Isabel s3PL ANTIPASS-CMP-dance-CAUS DET party
 ‘They made Isabel dance at the party.’
- e. Diego pu í Isabel wa-taʔáih tɪ
 Diego s3SG DET Isabel CMP-send SBR3SG
 tíʔ-u-te-néih
 ANTIPASS-CMP-PERF-dance
 ‘Diego sent Isabel to dance at the party.’

It is important to point out that other semantically related agentive transitives with cognate objects such as *tiʔi-kʷime* ‘to play a song’, *tiʔi-čʷika* ‘to sing a song’ cannot produce morphological causatives via the antipassive. This fact suggests that in Cora the crucial constraint involved in synthetic causative formation is not just transitivity, in other words, whether the verb is either transitive or intransitive, but rather the semantic nature of the verbal base. In this language, inactive bases generally allow morphological causative formation, while active verbs tend to inhibit this kind of linguistic causativity.

As I have shown above, a sociative causative meaning conveyed by means of the *-te* suffix is attested in only one agentive intransitive verb.³³ Interestingly, what

we can also observe when *-te* is attached to some members of this verbal class is the emergence of an applicative-comitative meaning. This is shown in the set of examples given in (27).

(27) Applicative-comitative meaning by *-te* suffixation in agentive intransitives

- a. í ɕíʔh ø-wa-ta-tíeh
 DET dog s3SG-CMP-PERF-run
 ‘As for the dog, it ran away.’
- b. í Joel ɕíʔh pu wa-ta-tíeh-te
 DET Joel dog s3SG CMP-PERF-RUN-APPL
 ‘As for Joel, he ran away with the dog.’ (carrying, holding the dog)
- c. p-o-u-ʔá
 s2SG-LOC.away-CMP-arrive
 ‘You arrived.’
- d. mi-y-áʔ-u-a-ste, yéʔeka
 s3PL-PO3SG-LOC.away-CMP-arrive-APPL here
 áriʔ iku
 go away/already
 ‘They arrived with him, he is finally here.’
- e. mi-gó-hoʔ-u-a-ste
 s3PL-PO3PL-LOC.away-CMP-arrive-APPL
 ‘They arrived with them.’

In (27b), (27d), and (27e), the *-te* suffix has an applicative function of introducing a comitative argument. The anaphoric constructions in (27c), (27d), and (27e) display some features particular to the subclass of agentive intransitives that can derive an applicative-comitative. They are verbal bases which occur obligatorily in some tense-aspect distinctions with deictic locatives, mainly with the different phonological allomorphs of the locative prefix ‘away’. This deictic marking is strengthened by the very special object marking that is carried by the new object argument added by the applicative derivation. As expected, the new object argument has to be cross-referenced on the verb by a primary object prefix in anaphoric constructions. What is very special in (27d) is the form of the primary object prefix of third person singular: it is *y-*, instead of the usual *ra-* that we have been discussing so far. This allomorph of the object prefix is not conditioned by phonological reasons, but rather by semantic verb class principles. It always co-occurs with the verbal bases that take obligatorily one of the allomorphs of the locative prefix ‘away’.³⁴ Another interesting feature of object marking in comitative derivations is that only third persons, singular or plural, can be expressed in this kind of constructions. The prefix for third person plural object in comitatives is similar to other object

constructions in the language. Notice in (27e) the presence of the allomorph go-third plural primary object prefix that we have already seen in previous examples.

The grammatical split for object marking and the obligatory presence of locatives formally distinguish the subclass of agentive intransitives that can undergo a comitative-applicative derivation by means of the *-te* suffix. Semantically, this subclass of agentive intransitives corresponds to deictic movement verbs.³⁵

The *-te* suffix in (27b), (27d), and (27e) has an applicative function of introducing a comitative argument, a very common behaviour associated with causative morphemes in a fair number of languages. Shibatani and Pardeshi (in this volume) suggest that the applicative meanings of comitative, instrumental, and benefactive arose from sociative causatives under the pressure of lexicalization. According to these authors, it is easy to derive a comitative reading ‘I walk with him’ from a sociative causative ‘I make him walk by walking with him’ since the former is an entailment of the latter. In Cora both functions associated with causative markers are attested in the class of agentive intransitive verbs, as seen above in the example of the verb *tíʔ-u-néʔih-te* ‘to make dance’ that has a sociative causative reading, and the set of examples of the subclass of deictic movement verbs which developed the comitative meaning.

Thus, morphological causatives in Cora have to face heavier constraints in the case of agentive verbal bases. These restrictions on the use of the *-te* suffix will be confirmed in the following sections.

3.2.4 Causative derivation from ingestive verbs

I found few cases of morphological causatives derived from transitive verbs. These verbal bases are similar to the group of verbs called ‘ingestives’ in South Asian linguistics studies, and which have in common the semantic feature of taking something into the body or mind literally or figuratively (Masica 1976, cited by Shibatani and Pardeshi in this volume). In Cora this class consists of verbs such as *séih* ‘to see’, *tíʔi-kʷa* ‘to eat corn products’, *ʔih* ‘to drink.PAST’, *mʷáʔa-re* ‘to know something’, as well as all the classificatory ‘take’ verbs in this language. Ingestive verbs in Cora have unique grammatical properties that distinguish them from true agentive transitives with regard to causativization processes. One of this particular properties is that they allow both morphological and analytic causatives. First I will examine morphological causatives in this verbal class. See the set of examples in (28).

(28) The morphological causative derived from the verb *séih* ‘to see’

- a. í Juan María pu wa-séih
 DET John Mary s3SG CMP-see
 ‘As for John, he saw Mary.’

- b. \emptyset -ra- ι -séih
 s3SG-PO3SG-CMP-see
 ‘He saw her.’
- c. í Alberto bířirařa pu í Juan séih-rařa-teře
 DET Albert corn field s3SG DET John see-CAUS-CAUS
 ‘As for Albert, he is showing the corn field to John.’
- d. í Alberto bířirařa pu í Juan wa-ta-séih-rařa
 DET Albert corn field s3SG DET John CMP-PERF-see-CAUS
 ‘As for Albert, he showed the corn field to John.’
- e. \emptyset -n-a- ι -ta-séih-rařa
 s3SG-PO1SG-CMP-PERF-see-CAUS
 ‘He showed it to me.’
- f. \emptyset -n-a- ι -ta-séih-rařa í bířirařa
 s3SG-PO1SG-CMP-PERF-see-CAUS DET corn field
 ‘He showed it to me, the corn field.’

In (28a) we have the transitive construction *í Juan María pu wa-séih* (DET John Mary S3SG CMP-see) ‘As for John, he saw Mary’. Note that the verb *séih* ‘to see’ is basically transitive because it is able to take an object prefix directly, as is shown in (28b). This verb undergoes a causative derivation which conveys the meaning of ‘show’ through a suffix complex that includes both *-rařa* and *-teře*. This suffix complex is visible in (28c) *í Alberto bířirařa pu í Juan séih-rařa-teře* (DET Albert corn field S3SG DET John see-CAUS-CAUS) ‘As for Albert, he is showing the corn field to John’. The causative suffix *-teře* truncates in the perfective punctual past, as you can see in (28d). This is a common tendency in two-valency verbs that form their causative counterpart with *-teře*.

Morphological causatives derived from ingestive verbs are interesting from a syntactic point of view because causativization increases the valency of the basic verb to a three place predicate. Given the fact that Cora has only one set of elements for object marking, in these cases the encoding of the causee represents a more serious problem. In (28e) we have the anaphoric version of the causative construction *\emptyset -n-a- ι -ta-séih-rařa* (S3SG-PO1SG-CMP-PERF-see-CAUS) ‘He showed it to me’, which tell us that the causee takes precedence over the original object for marking on the verb. The object prefix *n-* encodes the original subject of the basic verb whereas the original object loses its capacity for being cross-referenced in the verb, and is only recoverable from context. The original object of the basic verb can also be expressed explicitly by a full noun phrase as in (28f). To use such an object encoding device is very typical of primary object languages, such as Cora. This device puts into one relation the patient of a transitive clause and the beneficiary/recipient of a ditransitive sentence. Thus, in cases of double ob-

ject constructions, formed by causative or applicative derivation, the extra argument introduced by these derivational processes always gets the object marking on the verb.

As I have mentioned above, ingestive verbs can be embedded in periphrastic causatives with the verb *taʔáih* ‘to send’. In this case, the periphrastic construction does not allow a benefactive causative reading for the semantic reason that the object referred to in ingestive verbs does not come into the causer’s possession (Shibatani and Pardeshi in this volume). Some relevant examples figure in (29).

(29) Ingestive verbs in periphrastic causatives

- a. *í Pedro Juan pú wa-taʔáih t̩ í María wa-séih*
 DET Peter John s3SG CMP-send SBR3SG DET Mary CMP-see
 ‘As for Peter, he sent John to see Mary.’
- b. *í Alberto Joel pú wa-taʔáih t̩ í tem^wá*
 DET Albert Joel s3SG CMP-send SBR3SG DET tamales
tíʔ-u-k^waʔa-ni
 DEFOBJ-CMP-eat-IRR
 ‘As for Albert, he sent Joel to eat tamales.’

Therefore the group of ingestive verbs in Cora³⁶ exhibits a dual patterning; they behave both like non-agentive intransitives in deriving corresponding morphological causatives and like agentive transitives in allowing periphrastic causatives. Shibatani and Pardeshi (in this volume) ascribe the dual patterning of the ingestive verb class to the fact that they usually imply the involvement of a subject as both agent and patient, since taking something into one’s body or mind is both doing something and being affected at the same time. These authors conclude that profiling the patient role of the subject of these verbs permits their alignment with inactive intransitives, while focusing on the agent role aligns them with active bases.

Other ingestive verbs that derive morphological causatives in Cora are: *ʔih* ‘to drink.PAST’ that produces *ʔih-te* ‘to make someone drink’ or ‘to give something to drink’, *m^wáʔ-re* ‘to know something’ that forms the causative *m^wáʔ-te* ‘to teach’, *čuí* ‘to take, used for long and rigid objects’ that derives the causative *čuí-teʔe* ‘to give’.³⁷ Among them, it is worth discussing the case of the verb *ʔih* ‘to drink.PAST’³⁸ since it produces a morphological causative which conveys both benefactive and causative meanings, as it is shown in (30).

(30) Causative and benefactive meaning from *-te* suffixation on ingestive verbs

- a. *í Joel héiwa pu háh wa-ʔih*
 DET Joel QUANT s3SG water CMP-drink.PAST
 ‘As for Joel, he drank a lot of water.’

- b. ne-ra-r-ʔih-te, í Joel í há
 s1SG-PO3SG-CMP-drink.PAST-CAUS DET Joel DET water
 ‘I made him, Joel, drink the water.’
 ‘I gave him, Joel water to drink.’

Thus, (30b) means both to give water to someone and to force someone to drink something that he is not willing to drink. This semantic overlapping of benefactive and causative meanings seems to be typical of Cora “consumption verbs,” such as the lexical causative *ti-mí* ‘to feed someone, to feed domestic animals’ or ‘to make someone eat’, discussed in Section 2.

Interestingly, the *tʔi-* prefix combined with the verb ‘to drink’ produces a derived form which means ‘to take medicine’. The derived verb also undergoes a causative derivation through the use of the *-te* suffix, but this time it is with an exclusively causative meaning. This can be seen in (31).

- (31) Exclusively causative meaning from *-te* suffixation on ingestive verbs
- a. í Joel ø-tʔi-u-í
 DET Joel s3SG-DEFobj-CMP-drink.PAST
 ‘As for Joel, he took medicine.’
- b. pe-tʔi-n-a-r-ʔih-te
 s2SG-DEFobj-PO1SG-CMP-drink.PAST-CAUS
 ‘You made me take medicine.’

The existence of the group of ingestive verbs in Cora suggests that there are no true agentive transitives in this language that would show morphological causative formation. Even if ‘drink’ and ‘eat’ were treated as agentive transitive bases, we would have very few agentive transitives that would allow synthetic causatives. If this were to be the case, it would not be surprising, given the fact that languages with stringest restrictions on deriving lexical or morphological causatives from agentive transitive bases are likely to include ‘drink’ and ‘eat’ among those permitted to causativize (Dixon 2000: 65).

One of the relevant questions that immediately arises after analyzing these data is, why are morphological causatives that are derived from agentive transitives so severely restricted in Cora? A possible answer to this question can be based on syntactic reasons. For instance, since it is a primary object language, Cora lacks sufficient case markings to differentiate the multiple objects involved in a causative construction.³⁹ The fact that Cora has only one single set for object marking might decrease the number of verbs which enter into a process of causativization. However, this conclusion is quite unacceptable, at least in the case of Cora. The main evidence that contradicts this hypothesis is that applicatives are frequently derived from a large number of transitive verbs, and follow the syntactic pattern for primary object marking without exhibiting problems in speech processing. My hy-

pothesis is that the restrictions are grounded on semantic reasons. As I will show in Section 4, agentive subjects of transitive verbs retain a high degree of control when they enter into analytic causative constructions. The factor that prevents them from being causativized morphologically is probably their tendency to retain control.

4. Analytic causatives

Most of the agentive transitive bases that are not allowed to enter into a morphological causative derivation can be embedded in a periphrastic causative with the verb *taʔáih* ‘to send’. First I will examine the syntactic behaviour of this type of analytic causatives.

The grammatical devices displayed in Cora for constructing periphrastic causatives suggest very clearly that the language treats them as two verbal clauses. In order to construct an analytic causative in this language, we have to use one of the subject clitics for subordinate clauses that figure in Table 1. For the sake of explanation, I will repeat the whole set of these clitics: *neh* ‘first person singular’, *peh* ‘second person singular’, *tɪ* ‘third person singular’, *teh* ‘first person plural’, *seh* ‘second person plural’, and *meh* ‘third person plural’. These person subordinators perform two grammatical functions. First, they mark the level of a subordinate clause. Second, they indicate the person and number of the subject of the embedded clause. This kind of marking gives a high degree of independence to subordinate clauses. Givón (1980:371) comments that “the use of a subordinating morpheme which neatly separates the main clause from its complement clause is a coding acknowledgement that the two clauses are semantically still independent of each other, at least to some extent.” The following examples show the way in which the subject clitic of third person singular *tɪ* is used to construct analytic causatives:

(32) Analytic Causatives

- a. *í* Juan *ru-yáuh* pu *wa-taʔáih tɪ* wáka-si
 DET John POSS/RFL3SG-SON S3SG CMP-send SBR3SG COW-PL
wa-náwaʔa-n
 CMP-steal-IRR
 ‘As for John, he sent his son to steal the cattle.’
- b. María nu *wa-taʔáih tɪ* séih *yéçi* *wa-té-haʔusi-n*
 Mary S1SG CMP-send SBR3SG one dress CMP-PERF-wash-IRR
 ‘I sent Mary to wash a dress.’

In (32a) the main clause, *í Juan ru-yáuh pu wa-taʔáih* (DET John POSS/RFL3SG-son S3SG CMP-send), is followed by the embedded clause *tɪ wáka-si wa-náwaʔa-n* (SBR3SG cow-PL CMP-steal-IRR). Notice that the embedded clause is introduced

by the subject clitic *t* for subordinate clause. This clitic marks the subject of the embedded clause which in this case corresponds to a third person singular subject. In addition to separating the main clause from the subordinate clause, this kind of marking makes it possible for the subordinate subject to keep its agentive properties and retain a high degree of control. On the other hand, the tense aspect marking of the embedded verb in both clauses shows a high degree of freedom in the action expressed by this verb. Note that the embedded verbs in (32a) and (32b) carry their own aspect marking by means of the completive prefix *wa-* and a reduced form of an irrealis suffix which corresponds to *-n*. The aspect marking of the embedded verb indicates an irrealis which contrasts with the perfective past expressed by the main verb.

Cora uses a possessive reflexive prefix *ru-* in the following constructions. The use of such a prefix is a clear diagnostic for establishing a subject relation in a given language, so that here it represents additional evidence for proving the independent syntactic status of the subject of the embedded clause. This can be seen in (33).

(33) Evidence with the possessive reflexive prefix *ru-*.

- a. *í Pedro_i ru-yáuh_{i/j} pu wa-taʔáih t_j h_i*
 DET Peter POSS/RFL3SG-SON S3SG CMP-send SBR3SG DET
ru-iwa-m^wa_j wa-k^wíʔ-ni
 POSS/RFL3SG-sister-PLPOSS CMP-kill.PLPO-IRR
 ‘As for Peter_i, he sent his son_{i/j} to kill his sisters_j.’
- b. *í Pedro nawáʔari pu wa-taʔáih t_i yáuh-raʔan*
 DET Peter thief S3SG CMP-send SBR3SG SON-POSS3SG
wa-héʔika-n
 CMP-kill.SGPO-IRR
 ‘As for Peter, he sent the thief to kill his son.’
- c. *í Pedro nawáʔari_j pu wa-taʔáih t_j ru-yáuh_j*
 DET Peter thief S3SG CMP-send SBR3SG POSS/RFL3SG-SON
wa-héʔika-n
 CMP-kill.SGPO-IRR
 ‘As for Peter, he sent the thief_j to kill his son_j (the thief’s son).’

In (33a), the possessive reflexive *ru-* carried by the possessive construction, *ru-yáuh* ‘his son’, indicates that this construction is coreferential and controlled by the subject of the main clause, which in this case corresponds to the NP *Peter*. The fact that the possessive reflexive prefix *ru-* also occurs in the possessive construction, *ru-iwa-m^wa* ‘his sisters’, in the embedded clause, shows that the subject of the lower clause can also control the possessive reflexive. In (33b), the subject of the main clause loses its capacity to control, because the possessive construction, *yáuh-raʔan* ‘his son’, occurs within the scope of the embedded clause and can only be controlled

by the embedded subject. For this reason, *yaúh-raʔan* ‘his son’ does not take the possessive reflexive prefix and carries a simple possessive suffix *-raʔan*. Finally (33c) presents a case in which only the subject of the subordinate clause controls and is coreferential with the possessive reflexive. From these data, we can conclude that the true reflexive is invariably controlled by the subject. Therefore, the embedded subject is a clear independent syntactic subject.

As for the semantics of Cora periphrastic causatives, it is important to point out that when a causative situation is formulated by means of a verb like *send*, it specifies in addition that the influenced agent “goes,” has a self-agentive action (see Talmy 1976: 109–110). In this sense, the influenced causee retains agent properties. Thus, a causative situation formulated by *send* requires an external agent and does not accept an inanimate causer. For all these reasons, analytic causatives in Cora need obligatory agentive participants in the causative situation, in other words, participants that can retain control, volition and intention. This type of indirect causation, that typically involves the causer’s giving an oral direction or instruction to the causee, maintains a harmonious relation with the re-definition of indirect causation proposed by Shibatani and Pardeshi (in this volume) as a situation involving two agentive participants, an agentive causer and an agentive causee. On the other hand, Masayoshi Shibatani (personal communication) called my attention to the fact that Cora analytic causatives are similar to the Marathi benefactive construction (see Shibatani and Pardeshi, in this volume), which expresses a situation where the causer gets something done with a tangible effect beneficial to him, typically requiring an object construable as something transferred to the causer; he suggested that examples such as those in (32b) make possible such a reading, while those in (32a) indicate that the construction may have expanded its use to other situations. In any event what is clear from Shibatani’s considerations is the fact that the verb ‘send’ does seem to imply some sort of benefactive or purposeful intent on the part of the causer.

This holds true if we look at the different agentive transitive bases that are embedded in a periphrastic construction under the predicate *taʔáih* ‘send’. They are mostly ordinary life actions that certainly have a beneficial effect for the causer, such as *t,íá-ham^waʔa* ‘to make tortillas’, *tíʔu-kaʔi* ‘to chop wood’, *tíʔi-háʔusi* ‘to wash’, *tíʔi-m^warɛ* ‘to work’, *tíʔi-tua* ‘to sell’, *tíʔi-tap^wa* ‘to break (pots)’, *tíʔi-tai-ra* ‘to burn the corn field’, *tíhtɛ* ‘carry a burden’, *ku-ste* ‘to put someone (usually a child) to sleep’, *híhbeʔe* ‘to read’, and *yúʔusa* ‘to write’. Even presumingly negative actions such as *tíʔi-héʔika* ‘to kill.POSG’ may portray situations in which the causer gets something done that is beneficial to him; for instance, when one sends someone to kill a chicken for supper. An interesting way to test this benefactive reading is with the applicative derivation. Thus, all the members of the previous list can undergo a benefactive applicative through the addition of the *-e*, *-re*, or *-ǵíʔi-riʔi* suffixes.⁴⁰ Some relevant examples figure in (34).

- (34) Benefactive-applicative derivation in agentive transitive verbs
- a. *María nu wa-taʔáih tɪ séih yéçi wa-té-haʔusi-n*
 Mary s1SG CMP-send SBR3SG one dress CMP-PERF-wash-IRR
 ‘I sent Mary to wash a dress.’
- b. *í María yéçi séih pu n-a-té-haʔusin-e*
 DET Mary dress one s3SG PO1SG-CMP-PERF-wash-APPL
 ‘As for Mary, she washed a dress for me.’
- c. *Pedro nu wa-taʔáih tɪ séih tek^wáraʔi wa-héʔika-n*
 Peter s1SG CMP-send SBR3SG one chicken CMP-kill.SGPO-IRR
 ‘I sent Peter to kill a chicken.’
- d. *í Pedro tek^wáraʔi séih pu n-a-héʔika-çiʔi-riʔi*
 DET Peter chicken one s3SG PO1SG-CMP-kill.POSG-APPL-APPL
 ‘As for Peter, he killed a chicken for me.’
- e. *María nu wa-taʔáih tɪ páʔarɪh*
 Mary s1SG CMP-send SBR3SG child
haʔu-tá-ku-steʔ-in
 LOC.away-PERF-sleep-CAUS-IRR
 ‘I sent Mary to put the child to sleep.’
- f. *í María páʔarɪh pu n-a-tá-kus-ti-reh*
 DET Mary child s3SG PO1SG-CMP-PERF-sleep-CAUS-APPL
 ‘As for Mary, she put the child to sleep for me.’

Periphrastic benefactive causatives such as the ones illustrated in (34a), (34c) and (34e) may have applicative benefactive analogs in which the causer of the former construction correlates with the beneficiary of the latter one as in (34b), (34d) and (34f). Note that some of the embedded verbs in these analytic causatives can be lexical causatives (34c), or derived causatives (34e). They share the semantic feature of bearing a clear agent that functions as the embedded subject of the periphrastic causative.

The periphrastic causative may be applied to other kind of activities that does not necessarily imply an effect beneficial to the causer; this is the expanded use suggested by M. Shibatani (p.c.). Thus, predicates such as *tíʔi-náwaʔa* ‘to steal’, *tíʔi-héʔika* ‘to kill.POSG’, *tíʔi-né* ‘to dance’, *tíʔi-k^wíme* ‘to play a song’,⁴¹ agentive intransitives such as *wahka* ‘to play’, *ʔihwa* ‘to take a bath’, and positional verbs like *časɪ* ‘to stand up’, *yéisɪ* ‘to sit down’ are allowed to be embedded in analytic causatives. In all these cases, periphrastic causatives convey the meaning of a verbal order given by the causer to the causee to induce him to perform an action, this manipulative instruction is not implicative and may be refused by the agentive causee. Examples of this type have already been cited in (26e) and (32a).

All the semantic properties of Cora analytic causatives discussed here inevitably have syntactic correlations, as I have tried to show. The most relevant ones are: presence of a subordinator that divides the embedded clause from the main clause, independent subject marking in the embedded clause, and finally, a high degree of freedom in the aspect marking of the embedded verb in analytic causatives. For all these reasons, Cora periphrastic causatives are located in lower positions on the manipulative/binding hierarchy.

5. Conclusions

The inchoative and causative alternation derived from stative verbs with adjectival meaning that Cora shows in such a rich way, is a common typological feature in many languages. Haspelmath (1993:94–95) reports that this alternation is particularly regular in verbs that are derived from adjectives. According to this author, the tendency to enter into an inchoative/causative alternation is due to the fact that adjectival factitives generally contain only the meaning component ‘cause to become’ in addition to their adjectival meaning, and this meaning component is neither agent-oriented nor otherwise too specific or unlikely. What the analysis of Cora reveals is a strong preference in this language for non-directed alternations within the semantic domain of verbs with adjectival meaning, whether they be inchoative verbs behaving as labile or equipollent alternations. These results contradict the suggestions by Haspelmath (1993:106) when he states that “verbs do not differ significantly as to the frequency with which they occur in non-directed alternations.”

On the other hand, the fact that directed causatives derived by means of the *-te* suffix are mostly located in the semantic domain of non-agentive intransitive verbs can also be considered as a common typological feature in many languages. Givón (1976) reports very similar constraints in Bantu causativization, and from another perspective and with different purposes, Baker (1997) argues that this type of restrictions also appear in Mohawk and Northern Australian Languages, since in these languages morphological causatives are derived only from unaccusative verbs. We can conclude that the Cora *-te* suffix has the exclusive role of a causative morpheme on non-agentive intransitive bases, as in *kastéwa* ‘to cough’, *naʔaná* ‘to laugh’, *tɛtɛmʷaʔi* ‘to be crazy, to be seasick’, the verbal bases presented in Section 3.2.2, whereas in agentive intransitives that belong to the class of deictic movement verbs such as *uʔá* ‘to arrive’, *tíeh* ‘to run’, this suffix has developed an applicative function. In Cora, the spontaneous event vs. volitional deictic activity semantic distinction is the basis for the causative/comitative split. Shibatani and Pardeshi (in this volume) argue that one of the most relevant parameters worth

investigating in the typology of morphological causatives, is how causative morphemes differ in the ways they accommodate two agents. On the one hand, there are causative suffixes such as Japanese *-sase*, which typically expresses indirect causation involving two agents, Quechua *-çi*, which expresses both direct and indirect causation, and Marathi *-aw* suffix, which may convey sociative causation with two co-participating agents. These have not developed the applicative function associated with the causative suffix. The latter grammatical development is predicted in the case of restrictive affixes, which accommodating only a single agent, uniquely express direct causation. Some in addition have developed an applicative function. This is exactly the case of the Cora *-te* suffix that shows stringent constraints for

Table 2. Grammatical coding and semantic verb classes in Cora causative constructions

Grammatical coding and formal strategies							
<i>Mono-Clauseal</i>						Bi-Clauseal	
<i>Lexical Causatives</i>							
Suppletive lexical pairs							
Non-agentive							
Ambitransitives							
Labile verbs							
“break verbs”							
<i>Morphological Causatives</i>						Analytic Causatives	
Non-directed categories				Directed categories			
Inchoative derivation producing labile verbs		Equipollent Inchoative-Causative		Causative derivations			
-re	-re	-te	-ra	-te	-te	-te	taʔáih
-ta	-ta	-te	-te			-raʔa-te	
-ta-re							
Stative Verbs of Adjectival Meaning			Noun Stems	Non-agentive Intransitive Verbs	Causative/Comitative Split Agentive Intransitive Verbs	Ingestive Verbs	Agentive Transitive Verbs
Non-agent-oriented meaning components					Agentive bases		
Semantic verb classes							
Direct causation					Indirect causation		
Implicatives					Non-implicatives		

handling two agents. The semantic properties of this suffix allow it to derive morphological causatives only from non-agentive verbal bases that show spontaneous events and lack control participants.

Finally, Table 2 presents an array of the formal devices and verb classes that enter into Cora causative constructions. In this table, the transitions from the most stative situations, typical of direct and implicative causation, to the more agentive ones, characteristic of indirect and non-implicative causatives, are observed at several cut off points. Stative verbs of adjectival meaning draw the line between non-directed and directed formal strategies for producing morphological causatives. Another major cut off point is observed between agentive intransitive bases and agentive transitive ones, where while the former place severe constraints on different means of expressing linguistic causativity, and on a derived comitative function of a causative suffix, the latter introduce a new formal device, the bi-clausal periphrastic causative that shows consistency in a large number of verbs. It is important to point out that different formal devices may overlap; for example, lexical and morphological causatives are aligned at similar points, and cover similar verb classes.

Unlike other Uto-Aztecan languages described so far, the Cora data show severe verb class restrictions for constructing morphological causatives. Future research will tell us if other Uto-Aztecan languages behave in the same way with regard to morphological causativity.

Notes

1. I am very grateful to Joel Flores, my main Cora collaborator, for help with the language data, and also to the late Macario Flores for his beautiful storytelling. Without his oral narrative it would have been impossible to discover the causative/comitative split in agentive intransitive verbs in Cora. I would like to express my gratitude to all the participants of the Rice University Symposium on Causation and Interpersonal Manipulation in Languages of Central and South America for their valuable comments. Among them, I would like to single out Masayoshi Shibatani, editor of this volume, since many of the issues presented in this paper were conceived in relation and reaction to his ideas. On the other hand, I had many stimulating discussions concerning my work and theirs with Milagros Alfonso, Karen Dakin, Elisabeth Beniers, Tom Givón, Ricardo Maldonado, Chantal Melis, Valentín Peralta, Cecilia Rojas and Roberto Zavala. I would like to thank them all. I am specially indebted to Karen Dakin for correcting the unpolished state of my English. Of course, all the remaining errors are my own responsibility. Partial support for this research came from CONACYT, Special Project G34979-H *Enfoques diversos sobre el léxico yutoazteca*.
2. To be more precise, I work with the Meseño Cora dialect spoken in the town of Presidio de los Reyes, Nayarit, Mexico.
3. See Haspelmath (1993:93–105–106).

4. The phonological orthography used in the language data represents the following sounds: all the consonants with a *w* represent labialized sounds; *ç* is a voiceless palatal affricate, and *ç̣* is a voiceless alveolar one; *h* symbolizes a glottal fricative; *ṭ* is a laminal stop that in Cora has to be distinguished from the more usual palatalized consonants; *ɨ* is a high central vowel; vowel length is indicated by two dots after the corresponding vowel, and glottal vowels are represented by a glottal stop such as *eʔe*. Finally, */s/* is a voiceless alveolar fricative that in Cora Meseño has an allophonic retroflex variant [ʂ]. The conditions of the allophonic rule go as follows: [ʂ] occurs before the set of back vowels /*ṭ*, a, u/, whereas [s] occurs before non-back vowels such as /*i*, e/.
5. Word order in Cora is still a controversial issue. An alternative account is presented in Casad (1984: 168). In his study, Casad argues that in Mariteco Cora the most neutral linear order in single simple sentences is VSO.
6. This analysis of Cora agreement system differs significantly from the one presented in Casad (1984: 169–175).
7. Besides the function of an antipassive marker, the *tɨʔi-* prefix may refer to definite countable objects when used with some transitive bases.
8. I want to thank M. Shibatani for calling my attention to the fact that *tɨʔi-* prefix functions as an antipassive marker in Cora.
9. Bybee (1985: 102) reports that there are some languages in which number distinctions are lexicalized in verb stems. One of the most common pattern is that intransitive verbs show suppletive stems for the parameter of number concerning the subject, while transitive verbs display suppletive stems for number regarding the object. This is exactly the case in Cora for the verb ‘die’ and ‘kill’ respectively.
10. In my corpus, I did not find any systematic pattern of internal change such as vowel quality or consonant mutation among non-causative and causative verb pairs. The case of *yaʔa* ‘boil (intransitive)’ and *yeʔiʔiwa* ‘boil (transitive)’ is very unusual. For this reason, I prefer to group this verbal pair into the class of lexical causatives of the weak suppletive type.
11. See Vázquez (1996).
12. For Haspelmath (1993: 92) a labile alternation is observed when the same verb is used both in the non-causative and in the causative sense.
13. Dixon (2000: 4–5) adds a very useful terminological distinction within the domain of ambitransitive verbs according to which of the two core arguments of a transitive construction is identified with the S argument in an intransitive: S = A ambitransitives also called agentive ambitransitives, correspond to verbs such as *follow*, *win*; whereas S = O ambitransitives also called non-agentive ambitransitives or patientive ambitransitives, correspond to verbs such as *melt*, *trip*.
14. I am using a very rough gloss for describing the presence of the prefix *ti-* in some Cora two-place state predicates. The gloss “OBJ = OBJECT” that figures under the prefix *ti-* makes reference to the second argument of propositional attitude (*believe*), internal experience (*feel sick*), emotion (*hate*), and possession (*have*) two-place states predicates in this language (Cf. Van Valin and LaPolla 1997: 125).
15. See Dixon (2000: 74).

16. For the use of concepts such as, “implicative force,” “manipulative verbs” in causative constructions, as well as the existence of a semantic hierarchy of “binding” and its syntactic coding based on typological data from a wide range of languages, I will follow Givón (1976) and (1980).

17. I decided to illustrate the inchoative and causative derivation with the perfective form of these suffixes. The *-te* suffix when used in perfective form drops its final glottal stop. Therefore, in the case of inchoative constructions all the examples that I will give later on express past tense, and in the case of causative constructions a punctual perfective past.

18. I use the terms inchoative and causative in the sense of Haspelmath (1993:90) “An inchoative/causative verb pair is defined semantically: it is a pair of verbs which express the same basic situation (generally a change of state, more rarely a going-on) and differ only in that the causative verb meaning includes an agent participant who causes the situation, whereas the inchoative verb meaning excludes a causing agent and presents the situation as occurring spontaneously.” The terms internal and external causation are used less frequently in this paper for making the distinction between inchoative and causative respectively.

19. I follow Dixon (1982) for the basic semantic classes in which adjectives can be divided. Nevertheless, in the case of Cora, it was necessary to add other subclasses to the basic semantic divisions. For instance, the semantic class of taste belongs to the basic class of physical properties, but it behaves differently with respect to other members of this class, because it is attributed exclusively to inanimate entities.

20. In previous analysis of Cora (Casad 1984:343) the *-re* suffix has been glossed as “perfective abstract causative” without stating explicitly the class of verbs that this suffix takes for deriving a causative verb. This term is adequate if we understand by abstract the fact that colors and sizes of the physical property class are *core adjectival concepts*, in other words, property concepts that are far away from a nominal status.

21. This is probably due to the semantic distinctions observed by Anna Wierzbicka (1988:477–478) on this topic: “It seems that, generally speaking, shapes are more likely to be described by nouns than colours and sizes ... I think the reason why shapes are more ‘nouny’ than either sizes or colors is that shapes DELIMIT certain portions of reality and make them into countable entities, whereas neither sizes nor colours do that ... This suggests that it is common for people to think of things of different shapes as different KINDS of things, whereas differences in colour are normally not thought of in these terms.”

22. Another piece of evidence is that some property concepts show suppletive forms depending on the inanimate-animate distinction, such as, *mí?ime?ekan* ‘old (for inanimates)’, *bástakra?i* ‘old (for humans)’, *tem^wá* ‘young (for humans)’, *héhk^wa* ‘new (for inanimates)’.

23. Cora nouns can also be predicated directly, but in particular contexts such as emphatic clauses they need obligatorily a verbal copula. For instance, *María ní?ta?a pu pú?ene* (Mary woman S3SG be) ‘Mary is a woman.’ In contrast, property concepts never require the verbal copula in order to be predicated, and they are even considered ungrammatical if they do take it.

24. In some particular contexts, inanimate entities are allowed to bear a personal subject mark. For instance, we can observe the use of subject clitics in clauses involving an existential copula, such as *ǵánka pu pú?en* (brown sugar S3SG be) ‘It is brown sugar.’

25. Valdovinos Margarita (Forthcoming).
26. In previous analysis of Cora (Casad 1984:342) this suffix has been glossed as causative, even in cases in which the basic stem is a noun, such as *tyi'i-hata'uh-ta* (DISTR-bag-CAUS) 'She is making a woven shoulder bag', or *me-ti'i-hašu'u-ta* (they-DISTR-wall-CAUS) 'They are building a wall'. The last example figures in Casad (1997:139). In my analysis, *-ta* suffixation in these examples has the function of a verbalizer only.
27. See Talmy (1976:85).
28. Talmy (1976) makes an extensive and subtle account of the notions of figure and ground of the causing event and the caused event involved in a causative situation.
29. The verbal forms quoted in this list do not carry tense, aspect or person markers. They are really naked stems that cannot be used in the language in the way they are quoted.
30. See Haspelmath (1993:106).
31. It is important to point out that the verb *ʔihwa* 'to take a bath' is not reflexive, for this reason it does not show any traits of a possible transitive behaviour.
32. In Cora, the verb *mé* 'to walk.SG.PRES' is not classified formally as a deictic movement verb. Thus, the anaphoric constructions *n-a:-mé* (S1SG-CMP-walk.SGPRES) 'I walk' and *n-á:-ra* (S1SG-CMP-walk.SGPAST) 'I walked' do not show the obligatory presence of the locative prefix 'away'. Probably, for this reason, *mé* 'to walk.SG.PRES' did not develop the comitative-applicative derivation.
33. An extensive descriptive and theoretical account concerning the intermediate category of 'sociative causation' in active intransitives is presented by Shibatani and Pardeshi (in this volume).
34. See Casad (1984:328).
35. It is important to signal that not all the members of the subclass of deictic movement verbs can undergo a comitative-applicative derivation. In this sense, this morphological derivation is closely tied to lexical restrictions.
36. This group of verbs belong probably to the larger class of middle verbs in Cora. Since I have not made yet an extensive study on middle verbs in this language, I am unable to prove this possible and more general grouping.
37. An extensive account of the classificatory verbs for 'take' and their derived causative counterparts with the sense of 'give' can be found in Casad (1997). In this study, Casad explores the semantic, pragmatic and discourse behaviour of the different 'give' verbs in Cora. He also presents a complete list of the singular and plural object stems for these verbs, in other words, the suppletive forms that these two-valency verbs show when they take a singular or a plural object.
38. It is important to point out that the *tiʔi-* prefix does not occur with the verb *yé* 'to drink.PRES' in anaphoric constructions to indicate the generalized activity of drinking. Although the lack of this antipassive marker, the verb 'to drink' in Cora is formally a transitive verb because it can take directly a primary object prefix without requiring a category-changing apparatus of verb derivation. Thus, we have *ne-yé* (S1SG-drink.PRES) 'I drink', and *n-a:-ʔi* (S1SG-CMP-drink.PAST) 'I drank' that look like intransitive constructions, but

we also get *ne-ra-yé* (S1SG-PO3SG-drink.PRES) ‘I drink it’ with an object prefix directly attached to the verb which tells us that this verb is basically transitive.

39. This was one of the conclusions made by Givón (1976: 336) for the constraints shown on Bantu causativization. Now, Givón (personal communication) thinks that the constraints are basically semantic.

40. It is important to point out that Cora does not allow this kind of applicative form to be embedded under the periphrastic causative with *taʔáih* ‘to send’. Thus Cora speakers consider ungrammatical constructions such as **María nu wa-taʔáih tɪ séih tekʷáraʔi n-ar-héʔika-éiʔi-riʔi* (María S1SG CMP-send SBR3SG one chicken PO1SG-CMP-kill.SGPO-APPL-APPL) ‘I sent Mary to kill a chicken for me’. On the other hand, unlike other periphrastic causatives cited in this paper, this causative construction with an embedded applicative has not been attested in reliable textual material. For this reason, I am using the applicative forms in main clauses for proving the benefactive meaning conveyed by Cora analytic causatives.

41. The fact that periphrastic causatives with a benefactive reading are not attested in the class of cognate object verbs is strengthened by the absence of a benefactive applicative derivation in this subclass of transitive bases. Thus, examples such as ‘I danced/sang for Joel/on behalf of Joel’ are not attested in Cora.

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Olutec causatives and applicatives¹

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Introduction

Olutec is a Mixe-Zoquean language of the Mixean branch spoken in the southern part of the state of Veracruz, in Mexico. There are approximately twenty fluent speakers of Olutec, all of them older than seventy. Some of the prominent typological features of this language are: 1) it is highly polysynthetic with a very complex verbal template (allows incorporation of nominals and adverbs), 2) it shows complex verb compounds formed by the combination of up to five verbal roots, 3) the pronominal proclitics on the verb follow an ergative/absolute pattern in both simple and complex clauses, 4) it shows the direct vs. inverse alternation in semantically transitive clauses, and 5) it includes most of the traits of an OV language, although synchronically the word order of the core arguments is quite flexible.

Olutec exhibits various sublexical, morphological, and analytic (periphrastic) strategies to convey situations in which a particular event is instigated by an external cause. In the prototypical causative event there are at least two participants involved, the causer or instigator and the causee, which may be agentive or non-agentive depending on the type of situation encoded by the second part of the event. Various typological studies of causative constructions have shown that there is a close correlation between the formal expression of causative events and the semantic integration of the cause and effect (Haiman 1983; Comrie 1989; Givón 1990). Causatives that are conveyed sublexically are more likely to portray events in which the agent of the clause is directly responsible for the change of state of the causee. The causee in this type of expression is always a patient. Analytic causatives, which are in the other extreme of the scale, convey situations in which the causee retains some control of the outcome of the second part of the event. The causee of analytical causatives is usually an agent. The various types of causative patterns attested in Olutec follow the cross-linguistic tendencies where both, lexical causatives and the simplest of the morphological causatives convey direct causation (with a patientive

causee), whereas the most complex of the morphological causatives and the various analytical causatives convey indirect causation (with an agentive causee). In this study I will concentrate mostly in the discussion of the two types of morphological causatives, their etymological source, their syntax and semantics.

The various Olutec causative strategies apply to different classes of verb stems recognized by their formal expression in the stative, inchoative and causative alternations. The verb classes that are going to be discussed in this study are the intransitive inchoative class (e.g. *ʔo:k* ‘die’), the nonagentive ambitransitive class (e.g. *mutz* ‘break’), and the agentive ambitransitive class (e.g. *kay* ‘eat’).

Olutec exhibits two causative prefixes. The selection of one or the other depends on the number of core arguments of the verb to which the causative prefix attaches. Intransitive verbs take the prefix *yak-* whereas transitive verbs take the prefix *ta:k-*. Compare the following pairs:²

- (1) a. *naʔkxej=k ʔi=tükaw ʔi=ʔo:k-i*
 when=ANIM A3(POSS)=father A3(ABS)=die-COMD
 ‘When my father died.’ {rp3/198}
- b. *yak-* Causative for Intransitive = Transitive
naʔkxej=k tax=yak-ʔo:k-i jeʔ=k ʔowa-nak
 when=ANIM C1(ERG)=CAUS-die-COMD that=ANIM parrot-DIM
 ‘That is when I killed that little parrot.’ {abeja/5}
- (2) a. *yaʔaj ʔi=kay-pe pu:ro tzuʔch+i puʔtz+ʔaj*
 this A3(ERG)=eat-INCL.T only meat rotten
 ‘This one (the buzzard) eats only rotten meat.’ {zopil/229}
- b. *ta:k-* Causative for Transitive = Ditransitive
tan=ta:k-kay-u jaʔ chipin+tzü:pʔ+i
 A1(ERG)=CAUS-eat-COMI 3ANIM edible_green
 ‘I made her eat *chipile* (type of edible green).’ {deaa/143}

The prefix *yak-*, which grammaticalized from a transitive verb ‘let, distribute, give away’, exhibits two opposite functions. It is both a passive and a causative marker. As a passive, it decreases the valency of the verb. As a causative, it increases the valency of the verb. The prefix *ta:k-* is a complex morpheme that originated from the combination of an instrumental applicative *toj-*, plus the causative *yak-*. Synchronically this causative morpheme takes transitive clauses (with a patient object) as inputs. The causative *ta:k-* plus a transitive verb produces ditransitive constructions with a Primary and a Secondary object (Dryer 1986).

Olutec exhibits seven applicative markers that increase the verb valency. The applicative *mü:-* adds an associative/comitative argument to the original valency of a verb. That is, an associative turns intransitive verbs into transitive verbs. The same prefix conveys the notion of cause with some intransitive motion verbs. The

following pairs illustrate the two meanings that result when an intransitive verb is prefixed by *mü:-*. In (3), the applicative *mü:-* adds an associative/comitative object to the intransitive verb *ma:j?* ‘sleep’ giving as a result the transitive form *mü:-ma:j?* ‘sleep with somebody’; whereas in (4), the same applicative adds an affected object to the intransitive verb *nüx* ‘go’ giving as a result the causative verb *mü:-nüx* ‘take’.

- (3) a. *ka:=ma:j?-pa=k je?*
 NEG=sleep-INCL.I=ANIM that
 ‘He doesn’t sleep.’ {lm4/428}
- b. **Applicative Semantics**
ja?=k je? ?i=ta:ta-tük
 3ANIM=ANIM that A3(POSS)=grandson-PL
?i=mü:-ma:j?-pe
 A3(ERG)=ASSOC-sleep-INCL.T
 ‘She sleeps with her grandsons.’ {lm3/147}
- (4) a. *ta=nüx-am-a:t tan=na:x-mü*
 B1(ABS)=go-IRRI-PL.SAP A1(POSS)=land-LOC
 ‘We are going to go to our land.’ {rp2/256}
- b. **Causative Semantics**
tan=mü:-nüx-am-e:t=ak ya?aj ?apu
 A1(ERG)=ASSOC-go-IRRI-PL.SAP=ANIM this grandfather
wit-pa+?
 walk_around-NF
 ‘We are going to take the grandfather for a walk.’ {burdel/11}

Other examples of *mü:-* preceding motion verbs with causative reading are:

- (5) a. *je?+mü tax=mü:-mi:n?-a?n-ek*
 there C1(LOCAL)=ASSOC-come-IRRD-INV.LOCAL
 ‘You are going to bring me there.’ {aandb/197}
- b. *je?+mü=ak tax=mü:-nax-e ?ala:mwre-pa?t-pi*
 there=ANIM C1(ERG)=ASSOC-CROSS-INCD wire-under-LOC
 ‘I passed (my child) there, under the wire.’ {id3/467}
- c. *yampa?+chik+na? ja? tax=mü:-jamat-e jayma?*
 small_one 3ANIM C1(ERG)=ASSOC-arrive-INCD deceased
che:ncho ?i=tük-mü
 Chencho A3(POSS)=house-LOC
 ‘I used to take my child to the house of the late Chencho.’ {id3/767}

- d. *mejor=ak ta=mü:-piyü[?]k-ta:k[?]-i*
 instead=ANIM C3(ERG)=ASSOC-run-suddenly-COMD
 ?i=majaw
 A3(POSS)=woman
 ‘Instead, he suddenly started chasing his wife.’ {rsf2/112}
- e. *ka:=mix=mü:-tük+?i:y[?]-i=k je[?]+pi*
 NEG=C2(ERG)=ASSOC-enter-INCD=ANIM there
 ‘Don’t bring him in there!’ {rs8/144}

The applicative *küj-* adds a malefactive or benefactive argument to intransitive verbs. The derived verb includes two arguments, the original argument of the intransitive verb (agent or patient) and an applied argument that is affected by the action. Compare the following pairs:

- (6) a. *weka ø=pitzüm-pa=k lime:ta-pi*
 frog B3(ABS)=exit-INCL.I=ANIM bottle-LOC
 ‘The frog is coming out of the bottle.’ {id1/34}
- b. **Malefactive Applied Argument**
ta=küj-pitzüm-ü-pa ma:ncha-wok
 B1(ABS)=APPL-exit-INV-INCL.I mark-DIM
 ‘A little mark is coming out on me.’ {lm4/83}
- (7) a. *ta[?]jitik+?aj ø=tij-u=k je[?]+mü*
 big B3(ABS)=stay-COMI=ANIM there
 ‘The big ones stayed there.’ {rsch1/709}
- b. **Benefactive Applied Argument**
?i=küj-tij-nü-i-y=ak na:x=koj je[?]
 A3(ABS)=APPL-stay-already-COMD-INV.D.C=ANIM earth=just that
tan=ti:yu
 A1(POSS)=uncle
 ‘The land was already left for my uncle.’ {vg3/238}

The argument introduced by the same applicative prefix may convey the notion of cause with some ambitransitive activity verbs. For instance, the applied argument of the (b) examples refers to an external cause that induces the causee to perform a specific activity conveyed by the verb root. In these examples the applied argument is registered on the verb by the absolutive proclitic. This is clearly shown in example (9b) where the causer is indicated by the proclitic *ta=* ‘first person absolutive’.

- (8) a. *ø=?etz-pa=k je[?] majaw*
 B3(ABS)=dance-INCL.I=ANIM that woman
 ‘That woman is dancing.’

- b. $\emptyset=k\ddot{u}j\text{-}^?etz\text{-}\ddot{u}\text{-}pa$ $ja^?$ $je^?$ $majaw$
 B3(ABS)=APPL-dance-INV-INCL.I 3ANIM that woman
 ‘He is making that woman dance.’
- (9) a. $\emptyset=kapx\text{-}u=k$ $je^?$ $^?i=majaw$
 B3(ABS)=talk-COMI=ANIM that A3(POSS)=woman
 ‘His wife spoke.’ {rp2/135}
- b. $ta=k\ddot{u}j\text{-}kapx\text{-}\ddot{u}\text{-}w=ak$ $sa:ra$ $porke$
 B1(ABS)=APPL-talk-INV-COMI=ANIM Sara because
 $tan=chip\text{-}u$ $ja^?$
 A1(ERG)=scratch-COMI 3ANIM
 ‘I made Sara speak because I pinched her.’
- (10) a. $\emptyset=ya:x^?pa=k$ $je^?$ $chu:chu\text{-}nak$
 B3(ABS)=CRY-INCL.I=ANIM that small-DIM
 ‘The small boy is crying.’ {rsch1/584}
- b. $\emptyset=k\ddot{u}j\text{-}ya:x^?\ddot{u}\text{-}w=ak$ $ka:ta$ $^?i=^?unak$ $porke$
 B3(ABS)=APPL-CRY-INV-COMI=ANIM Cata A3(POSS)=son because
 $ja^?=k$ $^?i=ta:k\text{-}kay\text{-}u$ $ni:wi$
 3ANIM=ANIM A3(ERG)=CAUS-eat-COMI chilli_pepper
 ‘Cata made her son cry because she fed him with chilli peppers.’

The combination of the instrumental *toj-* plus the associative *mü:-* forms the complex applicative *tomo-* with associative meaning. This applicative adds a second agent to a transitive verb that already includes a cause. The applicative *tomo-* plus a transitive verb creates ditransitive structures. Similar to the complex causative *ta:k-* illustrated in (2b), the presence of the instrumental applicative *toj-* makes explicit that in addition to the two agents involved in the situation, there is a patient functioning as Secondary Object. Compare the following pair:

- (11) a. **Transitive: Agent acts on a Patient**
 $ka:=na^?kxej$ $tax=kay\text{-}i$ pak
 NEG=when C1(ERG)=eat-INCD bone
 ‘I never eat bone.’ {rspf2/458}
- b. **Ditransitive: Two Co-agents act on a Patient**
 $fri:to$ $tan=tomo\text{-}kay\text{-}pe=k$ $pro:we\text{-}nak$
 fried_blood A1(ERG)=INST+ASSOC-eat-INCL.T=ANIM poor-DIM
 ‘I am eating fried blood’ with the poor little woman.’ {aandc/200}

In addition to the morphological causatives (and applicatives) Olutec exhibits various analytic causative strategies used when the causer induces the causee, in an indirect way, to be in a particular state or to perform an action. The analytic strategies are expressed by complex constructions with a matrix and an embedded verb.

All the matrix predicates in analytic constructions belong to the set of manipulative verbs such as *tzak* ‘send’, *tu:t?* ‘put’, *tun* ‘do, make’, *yakkapx* ‘order’, and *yak* ‘let’.

- (12) a. *min=tzak-u=k* *ta=?awtzo?-e*
 A2(ERG)=send-COMI=ANIM C3(ERG)=close-INCD
 ‘You sent him to close it (the door).’ {aand/153}
- b. *?i=tzak-u=k* *kata xi:mu ta=pük-i*
 A3(ERG)=send-COMI=ANIM Cata Simon c3(ERG)=grab-INCD
küp+i
 wood
 ‘Cata sent Simon to get firewood.’
- (13) *ja?=k* *to:nyo ta=tu:t?-ü-w=ak*
 this=ANIM Toño B1(ERG)=put-INV-COMI=ANIM
tax=yak-pitzüm-a?n *nü:*
 C1(ERG)=CAUS-leave-IRRD water
 ‘Toño made me pull out water.’
- (14) *si:ri* *?i=tun-u=k* *tan=yox+e+tun-a?n*
 Cirilo A3(ERG)=make-COMI=ANIM A1(ABS)=work-IRRD
 ‘Cirilo made me work.’
- (15) a. *le:ncho=k* *mi=yak+kapx-ü-w=ak*
 Lencho=ANIM B2(ABS)=order-INV-COMI=ANIM
min=nükx-a?n=xü *?i=tük-mü*
 A2(ABS)=go-IRRD=EV A3(POSS)=house-LOC
 ‘Lencho ordered you to go to his house.’
- b. *?antun* *?i=yak+kapx-u=k* *siri*
 Antonio A3(ERG)=order-COMI=ANIM Cirilo
ta=wit-a?-a?n=ak *?i=kay+e+tük* *piyu*
 C3(ERG)=twist-BEN-IRRD=ANIM A3(POSS)=crop chicken
 ‘Antonio ordered Cirilo to twist the chicken’s crop.’
- (16) *tax=yak-i* *?etz -pa+?* *pi:nak*
 C1(LOCAL)=let-INCD dance-NF a_little
 ‘I allowed you to dance a little.’ {diab2/101}

These types of complex constructions are confined to situations involving agentive causees. Periphrastic causatives are used to convey readings in which the causer acts on someone indirectly, thus the reading ‘X causes Y to stand up’ is encoded periphrastically while the reading ‘X stands Y up’ is encoded morphologically. Periphrastic causatives are not common in my corpus. Most of the examples of periphrastic causatives were obtained through elicitation. These constructions are not going to be discussed in this paper.

The organization of the paper is as follows. First, an introduction to the basic morphosyntactic features of Olutec is provided. This section deals only with the features that are going to be used in the discussion of causative constructions. Second, six different verb classes are distinguished on the basis of the patterns followed by the predicates when they convey states, inchoatives and causatives. The correlation of these formal patterns with semantic verb classes is the focus of this section. Third, the semantics and syntax of the two morphological causatives that result in monotransitive verbs are discussed. Special attention is given to the various paths of grammaticalization of the verb *yak* 'let.' Fourth, the morphological causative that creates double object constructions is contrasted with two other double object constructions in which the added argument is a beneficiary, or instrumental. In the conclusion, I summarize the findings.

1. Some basic features of Olutec

Olutec is a head-marking, ergative and inverse language. It shows various features that are prototypical of OV languages: a) postpositions, b) nouns followed by relational nouns, c) genitives before the possessed nouns, d) main verbs before flexional auxiliaries and light verbs, and e) incorporated nouns before verbs. The language also exhibits VO features that very likely developed through contact with verb-initial languages of other families located in the adjacent area, such as Mayan, Otomanguean and Spanish. The following are some of the Olutec innovative VO features: a) prepositions (one native and several others borrowed from Spanish), b) analytic auxiliaries in preverbal position (Zavala, in press a), c) possessed nouns followed by their genitive (a few cases in texts), and d) main verbs followed by complement clauses. In actual narrative discourse, Olutec shows a clear preference for a VO order. Out of a corpus of 591 clauses, 81% of the 127 tokens with an overt "O" followed the VO order. The position of the "A" argument is much more flexible without any clear tendency towards AV or VA order (46% of the 50 tokens with an overt "A" showed AV order, whereas the other 54% of the same tokens showed VA order). Within the same corpus of 591 clauses, the "S" argument of intransitive verbs showed a clear preference to appear after the verb (out of a corpus of 185 tokens with an overt S, 82% showed VS order) (cf. Zavala, in press b).

Nominal expressions with core argument function are not marked by adpositions and may be cross-referenced on the verb by proclitics and plural markers. In contrast, nominal expressions with oblique function are always marked by adpositions or relational nouns. In addition, obliques cannot be cross-referenced on the verb by proclitics or plural markers. This is illustrated in (17), which is an intrans-

sitive clause with four nominal expressions. The only nominal with core argument function is the first-person independent pronoun, *?ü:tz*, which does not bear any adposition. This pronoun cross-references the 1st person absolutive proclitic, *ta-*, on the verb. The other three nominals have oblique function. The first two, *ya?mü* ‘here’ and *tantükmü* ‘my house’, are locative expressions marked by the postposition *-mü*. The third one, *mü:tak tan?unak yo?jwa?aj* ‘with my son’, is a comitative expression marked by the preposition *mü:t*.

- (17) *?ü:tz ya?-mü ta=?it-pa tan=tük-mü*
 I PROX-LOC B1(ABS)=exist-INCL.I A1(POSS)=house-LOC
mü:t=ak tan=?unak yo?jwa+aj
 with=ANIM A1(POSS)=offspring male
 ‘I am here in my house with my son.’ {aand/475}

Nominal expressions with peripheral role (e.g. associative, instrument, dative, benefactive, malefactive, location, and reason) may be conveyed as core arguments (without an adposition) once the verb is derived by an applicative affix. For instance, a comitative participant may be coded as an oblique argument, as shown in (17), or as a direct object of a derived transitive verb, as shown in (18). The applicative prefix *mü:-* (18) (which grammaticalized from the adposition *mü:t* ‘with’) turns the intransitive verb *?it* ‘exist’ into the transitive verb *mü:~it* ‘be with’. Note that the comitative nominal in core argument function, *?ixu?ni* ‘his dog’, is not marked by the preposition *mü:t* ‘with’.

- (18) *je?+mü=ak ?i=xu?ni ta=mü:-?it-i*
 there=ANIM A3(POSS)=dog C3(ERG)=ASSOC-exist-INCD
 ‘There he is with his little dog.’ {id1/301}

Olutec distinguishes two types of clauses: independent and dependent. The two types of clauses can be differentiated because they follow different patterns for marking both person and aspect. The language has two different paradigms of aspect markers. One aspectual paradigm only occurs in independent clauses and the other only occurs in dependent clauses. In each paradigm three different aspects are distinguished: incompletive, completive and irrealis.

1.1 Person marking and aspectual marking in independent clauses

In the paradigm for independent clauses there are two incompletive markers that are selected according to the transitivity of the verb. Transitive verbs select *-pe* whereas intransitive verbs select *-pa*. The conditions that trigger the use of one of the two forms of irrealis markers will be discussed later. The distribution of the aspect markers in independent and dependent clauses is outlined in Table 1.

Table 1. Aspect markers for independent and dependent clauses

Aspect	Type of clause	
	Independent	Dependent
<i>Incompletive</i>	- <i>pa</i> (Intr.) - <i>pe</i> (Tr.)	- <i>i/-e</i>
<i>Completive</i>	- <i>u</i>	- <i>i</i>
<i>Irrrealis</i>	- <i>am</i> (Direct) - <i>an ... pa</i> (Inverse)	- <i>aʔn(e)</i> (Direct) - <i>aʔne</i> (Inverse)

Table 2. The three sets of person proclitics (ergative alignment)

Function	Type of clause	
	Independent	Dependent
<i>Ergative</i>	A	C
<i>Absolutive</i>	B	A

Olutec follows an ergative alignment in which the “S” of intransitive verbs and the “O” of transitive verbs are coded by the same set of person proclitics, whereas the “A” of transitive verbs is coded by a different set (Dixon 1994). The core arguments of the verb do not need to be expressed by nominal expressions external to the verb complex. The core arguments are inferred from the morphology that marks person, plurality, and inversion on the verb. The language has three different sets of person proclitics that I will refer to as Set A, Set B and Set C. Their distribution in independent and dependent clauses is sketched in Table 2.

In independent clauses, the verb can be preceded either by a form from Set A or by a form from Set B. The members of Set A function as ergative markers, signaling the actor of transitive clauses which include a 3rd person Primary Object, as in (19).

(19) **A = Ergative**

min=juy-u min=piyu tzuʔch+i-nak
 A2(ERG)=buy-COMI A2(POSS)=chicken meat-DIM
 ‘You bought your chicken, and meat.’ {deaa/165}

Set A may also mark the possessor of nouns, as in (20).

(20) **A = Possessor**

min=to:k-u min=tzapuyin
 A2(ERG)=sell-COMI A2(POSS)=green_onion
 ‘Did you sell your green onions?’ {aandc/124}

The Set A paradigm is shown in (21). The singular and plural proclitics are identical. Plurality with 1st and 2nd person is indicated with the suffix $-(V):t$, which follows the aspect marker. The phonetic quality of the vowel of $-(V):t$ matches the phonetic quality of the preceding vowel within the verb. The suffix $-ütz$, which follows $-(V):t$, is used to mark 1st person exclusive. Finally, the suffix $-küx$, which precedes the aspect marker is optionally used to convey plurality of 3rd person core participants.

(21) **Set A. Ergative in independent clauses and possessor.
Absolutive in dependent clauses (cf. Sec. 1.2)³**

1SG	<i>tan=</i>	1PLINCL	<i>tan=</i>	$-(V):t$
		1PLEXCL	<i>tan=</i>	$-(V):t-ütz$
2SG	<i>min=</i>	2PL	<i>min=</i>	$-(V):t$
3SG	<i>ʔi=</i>	3PL	<i>ʔi=</i>	$(-küx)$

In independent clauses, the members of Set B mark the absolutive. Set B signals the only argument of monovalent predicates and the Primary Object (PO) of transitive predicates (patient in monotransitives, and recipient, benefactive, or possessor of patient in ditransitives).

(22) *mi=ju:n+ni:y²-pa=koj*
 B2(ABS)=sit-INCL.I=just
 ‘You are just sitting.’ {rp3/504}

The patient of monotransitive independent clauses is marked by a Set B proclitic when the actor is 3rd person, as shown in (23). In these contexts, the verb takes an inverse suffix, $-ü$, indicating that the patient outranks the agent in saliency. Note that the only argument marked by a pronominal proclitic in the inverse is the patient.

(23) *mü:t=ak min=mixtun-²awok je²=k=je²*
 and=ANIM A2(POSS)=cat-DIM that=ANIM=CLEFT
mi=ko:+chikx-ü-pa
 B2(ABS)=take_care-INV-INCL.I
 ‘And your little cat, it’s it which is taking care of you.’ {rspf2/684}

In (24) Set B signals the Primary Object of ditransitives. The inverse marking-pattern observed in (23) is also attested in (24). Neither the agent, nor the Secondary Object is signaled by a person proclitic on the verb.

- (24) *ta=mo:yʔ-ü-w=ak* *tan=ta:ta*
 B1(ABS)=give-INV-COMI=ANIM A1(POSS)=grandson
tan=lugar-ʔunak
 A1(POSS)=place-DIM
 ‘My grandson gave me my little place (where I live).’ {aand/300}

The Set B paradigm is given in (25). The singular and plural absolutive markers are identical. Observe that the 3rd person is unmarked. The same plural suffixes occurring with Set A are found with Set B.

(25) **Set B. Absolutive in independent clauses**

1SG	<i>ta=</i>	1PLINCL	<i>ta=</i>	-(V):t
		1PLEXCL	<i>ta=</i>	-(V):t-ütz
2SG	<i>mi=</i>	2PL	<i>mi=</i>	-(V):t
3SG	\emptyset =	3PL	\emptyset =	(-küx)

1.2 Person marking and aspectual marking in dependent clauses

Clauses following an auxiliary, a matrix verb, or an adverb display a second marking pattern to signal aspect and person. Clauses that follow the second pattern will be referred to as *dependent* clauses. The aspect markers in dependent clauses are selected from the right column of Table 1. These are: the incomplete *-i* or *-e*,⁴ the completive *-i*, and the two irrealis markers *-aʔne* and *-aʔn*. In dependent clauses, Set C has an ergative distribution, whereas Set A has an absolutive distribution. Examples of dependent clauses where Set C signals the actor appear in (26).

(26) **ADVERB + Set C = Actor of transitive**

- a. *jata* *mix=tun-i* *min=tük*
 right_away C2(ERG)=do-COMD A2(POSS)=house
 ‘You built your house right away.’ {aand/594}

AUXILIARY + Set C = Actor of transitive

- b. *jat-pa=na* *mix=tun-i*
 be_able-INCL.I=still C2(ERG)=do-INCD
 ‘You can still do it.’ {lm3/175}

MATRIX + Set C = Actor of transitive

- c. *ʔü:tz* *tan=ʔe:p-am* *jumej* *mix=to:k-aʔn*
 I A1(ERG)=see-IRRI how C2(ERG)=sell-IRR
 ‘I will see how you are going to sell it.’ {lm1/22}

The entire paradigm of person markers signaling the actor in dependent transitive clauses with 3rd person Primary Object is shown in (27).

(27) Set C. Ergative in dependent clauses

1SG	<i>tax=</i>	1PLINCL	<i>tax=</i>	-(V):t
		1PLEXCL	<i>tax=</i>	-(V):t-ütz
2SG	<i>mix=</i>	2PL	<i>mix=</i>	-(V):t
3SG	<i>ta=</i>	3PL	<i>ta=</i>	(-küx)

In dependent clauses, the only argument of intransitives and the PO of transitives (patient of monotransitives, and recipient, benefactive, or possessor of the patient of ditransitives) are marked by the same set of proclitics that signals the actor in independent transitive clauses, i.e., Set A (21). Thus, Set A has an ergative distribution in independent clauses and an absolutive distribution in dependent clauses. In (28) the Subject of a dependent intransitive verb is marked by the 2nd person proclitic from Set A.

(28) ADVERB + Set A = Only argument of intransitive

jumü *min=tük+ju:n+ni:y²-i*

where A2(ABS)=live-INC D

‘Where do you live?’

{aand/564}

Among the different types of monovalent predicates (verbal and non-verbal), intransitive verbs are the only ones that take a Set A proclitic when following adverbs, auxiliaries, or matrix verbs. That is, nouns and adjectives in predicate function never take a Set A proclitic under the conditions that intransitive verbs do. Instead, non-verbal predicates take a Set B proclitic in all contexts, as illustrated in (29).

(29) ADVERB + Set B = Only argument of non-verbal predicates

seme *mi=chikxpak* *mi:tz*

very B2(ABS)=pretty you

‘You are very pretty.’

{rspf2/647}

Set A, signaling the Primary Object of monotransitive and ditransitive dependent verbs, is illustrated in (30). The verb in (a) is monotransitive, whereas the one in (b) is ditransitive. Note that when the PO is overtly marked on the verb, both the actor and the Secondary Object are left unmarked and the verb takes an inverse suffix, *-y* (in completive) and *-j* (in incompletive).

(30) ADVERB + Set A = PO

a. na²kxej=k *?i=pa:t-i-y* *jamaj=k* *rrewelde*

when=ANIM A3(ABS)=find-COMD-INVD.C that=ANIM rebel

‘When those rebels found him [...]’

{olu1/35}

- b. je? ʔu:ra=k *min=nüm-aʔx-aʔn+e-j*
 that hour=ANIM A2(ABS)=tell-BEN-IRRD-INV.D.I
 ‘That is when she is going to tell you that.’ {compa/111}

In summary, Olutec distinguishes two types of clauses: independent vs. dependent. The two types of clauses can be identified by their dissimilar patterns of marking aspect and person. Olutec follows an ergative alignment in both independent and dependent clauses. It uses three sets of person markers to signal the core arguments of the clause. In independent clauses Set A has an ergative distribution whereas Set B has an absolutive distribution. In dependent clauses Set C has an ergative distribution whereas Set A has an absolutive distribution. An ergative marker (Set A in independent clauses and Set C in dependent clauses) marks the actor when the Primary Object of the clause is a 3rd person. An absolutive marker (Set B in independent clauses and Set A in dependent clauses) signals the Primary Object of transitive clauses when the actor is 3rd person. In these contexts the verb takes an inverse marker. Both direct and inverse clauses are syntactically transitive, i.e., the two verbal arguments of the verb in direct and inverse patterns can be expressed without being marked by an adposition. Additional evidence that both arguments have core status comes from plural marking on the verb. The argument unexpressed by the proclitic on the verb may be cross-referenced by a plural suffix when its reference is plural. For instance, in the direct construction shown in (31), the 3rd person plural patient is cross-referenced on the verb by the plural suffix *-küx*.

- (31) mü:t=ak je?+mü:t=ak je? *tax=tzak-küx-i* xujta:tu-tük
 and=ANIM then=ANIM that C1(ERG)=send-PL3-COMD soldier-PL
 ‘And then, I sent the soldiers.’ {id3/553}

The same suffix may be cross-referencing the 3rd plural agent in inverse constructions, as shown in (32).

- (32) je?+tük *ta=küʔ+pük+tzow-küx-ü-w*
 they B1(ABS)=help-PL3-INV-COMI
 ‘They helped me.’ {rspf1/298}

1.3 Four different patterns: Direct, inverse, local direct, and local inverse

Only one of the core participants selected by a multivalent verb can be explicitly signaled in the slot for person proclitics preceding the verbal stem. This participant may be either the agent or the Primary Object. The choice as to which participant is overtly marked depends on the rank that the participant occupies in a saliency hierarchy. This hierarchy comprises three subparts: a person hierarchy (33a), an animacy hierarchy (33b), and a topicality hierarchy (33c). The saliency hierarchy

stipulates that speech act participants (SAP) outrank 3rd person participants; and within the 3rd person subset, the most prominent 3rd person participant in terms of animacy and topicality (high-salience 3rd person) outranks the least prominent nominal (low-salience 3rd person).

- (33) **Olutec Saliency Hierarchy**
- a. SAP (1>2) > 3 **Person**
 - b. human > animate > inanimate **Animacy**
 - c. topical > less topical **Topicality**

Olutec transitive clauses may follow four distinct morphological patterns: a) the direct, b) the inverse, c) the local-direct and d) the local-inverse. In the direct pattern the agent represents the most salient participant of the clause. In the inverse pattern the Primary Object aligns with the most salient participant of the clause. In the local-direct pattern 1st person is the agent and 2nd person is the PO, whereas in the local-inverse pattern 2nd person is the agent and 1st person is the PO. Table 3 shows the distribution of the direct and inverse patterns for a transitive verb. The combinations marked as DIR are direct, whereas the ones marked as INV are inverse.

Note that three of the combinations in Table 3 are obligatorily direct: 1:3, 2:3, 1:2. On the other hand, the combinations 3:1, 3:2, 2:1, as well as the reflexive and reciprocal constructions are always inverse. Similar to Algonquian languages (cf. Dahlstrom 1991 for Plains Cree) and Kutenai (Dryer 1994), the combinations 3rd person acting on 3rd person may be encoded as direct or inverse depending on the saliency status of the agent and the Primary Object. When the agent is more topical (proximate) than the PO (obviative), the construction is direct. With the direct pattern, the agent is overtly marked on the verb and the PO is unmarked.

- (34) **PROX** **OBV**
- de+je[?]+mü ta=kep-i=k* *ja:+tuk komo ma[?]tzu*
- after_that c3(ERG)=look_for-COMD=ANIM another as lover
- ‘(There was a man whose wife died.) After that he looked for another (woman) to have as a lover.’ {olu5/12}

Table 3. Direct and inverse patterns in transitive clauses

Agent	Primary Object		
	1	2	3
1	INV (RFLX)	LOCAL.DIR	DIR
2	LOCAL.INV	INV (RFLX)	DIR
3	INV	INV	INV (RFLX)/ DIR (3:3’)/INV (3’:3)

When the PO is more topical (proximate) than the agent (obviative), the construction is inverse. In the inverse, the PO is overtly marked on the verb and the agent is unmarked. In this pattern the verb takes an inverse suffix.

(35) PROX

?i=yak-tze:k-i $\text{?i=tze:k+?i:y?-i-y=ak}$
 A3(ABS)=PASS-SCOLD-COMD A3(ABS)=SCOLD-COMD-INVD.C=ANIM

OBV

ko?pak+tun+pa+?

boss

'He (the man who was selling shit); was scolded. The mayor (of the town)
 scolded him;.' {olu4/94}

Transitive clauses with a SAP agent and a SAP Primary Object display two additional patterns that are morphologically distinct from the direct and the inverse patterns already described. These two additional patterns will be referred to as *local*, following the tradition of Algonquianists. 1st agent acting on 2nd PO results in a direct construction, whereas 2nd person agent acting on 1st person PO results in an inverse construction. The verb of both local configurations, (1:2) [1st person acting on 2nd person] and (2:1) [2nd person acting on 1st person], bears the invariable proclitic *tax=* (the same form as the 1st person ergative for dependent clauses, i.e., 1st person from Set C). This is a clear indication that 1st person outranks 2nd person on the person hierarchy. The local direct construction is morphologically unmarked, whereas the local inverse construction takes the inverse suffix *-(V)k* after the aspect marker.⁵ The two local patterns in independent clauses are illustrated in (36).

(36) a. Local Direct (1:2)

tax=winü?+pa:t-pa

c1(LOCAL)=remember-INC.I

'I remember you.'

{olu5/157}

b. Local Inverse (2:1)

$\text{tax=winü?+pa:t-pa-k}$

c1(LOCAL)=remember-INC.I-INV.LOCAL

'You remember me.'

The same person proclitic *tax=* appears in the two local patterns of dependent clauses. Note also that the inverse marker for local independent clauses, the suffix *-(V)k*, is the same inverse marker found in local dependent clauses, (37b).

- (37) a. **Dependent Local Direct (1:2)** (triggered by an adverb)
ya[?]+mü=koj tax=ʔe:p-e
 here=only c1(LOCAL)=see-INCD
 ‘I only see you here.’ {Ve/219}
- b. **Dependent Local Inverse (2:1)** (triggered by an auxiliary)
japom mi:n[?]-a[?]n tax=pük-i-k
 tomorrow come-IRRD c1(LOCAL)=grab-INCD-INV.LOCAL
 ‘Tomorrow you will come to pick me up.’ {Ll/85}

2. Olutec verb classes

Olutec exhibits six different verb classes that can be recognized on the basis of their formal realization (as basic or derived forms) in the stative, inchoative and causative alternations. The first two alternations are intransitive, whereas the causative alternation is transitive. The stative form of a predicate occurs when the situation portrayed is not dynamic. The term inchoative is used here in order to refer to events or processes that result in the change of state, condition, position or location of the only participant involved. The causative alternation conveys events in which a causer induces the change of state, condition, position or location of the participant that represents the subject of the inchoative counterpart.

Agentive ambitransitive verbs (class 6) do not have an inchoative alternation. (The three “X’s” in the inchoative column signals the absence of this alternation.) On the other hand, this is the only class of verbs whose intransitive non-derived alternation includes an agentive participant that corresponds to the subject of the transitive counterpart. For instance, the subject of the verb *kay* ‘eat’ is the ‘eater’ participant in both the intransitive and the transitive counterparts. The causative form of agentive ambitransitive verbs does not share the same semantics with the first five classes of verbs with inchoative counterparts. In the causative alternation of agentive ambitransitive verbs, the causer makes the causee perform an activity, i.e., the causee is the initiator of another event that does not convey a change of state, condition, position or location.

The six different classes illustrated with some of their members are given below.

2.1 The direction of the derivation and the verb classes

The six formal classes shown in Table 4 are also semantic classes. Adjectival predicates (class 2), nonagentive intransitive verbs (class 4), and agentive ambitransitive verbs (class 6) have one basic form from which the other two alternations are de-

Table 4. Olutec verb classes and their alternations

STATIVE	INCHOATIVE	CAUSATIVE
1. Positional Verbs		
Basic	Basic	Derived
<i>paw-ni:yʔ</i> 'stand'	<i>paw-ni:yʔ</i> 'stand (intr.)'	<i>yak-paw-ni:yʔ</i> 'stand (tr.)'
<i>ju:n-ni:yʔ</i> 'be seated'	<i>ju:n-ni:yʔ</i> 'sit (intr.)'	<i>yak-ju:n-ni:yʔ</i> 'sit (tr.)'
2. Verbs Derived from Adjectives		
Basic	Derived	Derived
<i>chu:chu</i> 'be small'	<i>chu:chu-ʔi:yʔ</i> 'become small'	<i>yak-chu:chu-ʔi:yʔ</i> 'make sth. small'
<i>jam</i> 'be ash-colored'	<i>jam-ʔi:yʔ</i> 'become sooty'	<i>yak-jam-ʔi:yʔ</i> 'make sth. ash-colored'
<i>paʔk</i> 'be sweet'	<i>paʔk-ʔi:yʔ</i> 'become sweet'	<i>yak-paʔk-ʔi:yʔ</i> 'make sth. sweet'
3. Verbs Derived from Nouns		
Derived	Derived	Derived
<i>jaykak-ʔat</i> 'be a man, a person'	<i>jaykak-ʔi:yʔ</i> 'become a man'	<i>yak-jaykak-ʔi:yʔ</i> 'make sb. turn into a man'
<i>ka:na-ʔax</i> 'be salty, salt exist in Y'	<i>ka:na-ʔi:yʔ</i> 'become salty'	<i>yak-ka:na-ʔi:yʔ</i> 'make sth. salty'
<i>nü:-ʔi:yʔ-ik</i> 'be melted'	<i>nü:-ʔi:yʔ</i> 'become liquid, melt (intr.)'	<i>yak-nü:-ʔi:yʔ</i> 'melt (tr.)'
4. Nonagentive Intransitive Verbs		
Derived	Basic	Derived
<i>ʔo:k-ik</i> 'be dead'	<i>ʔo:k</i> 'die'	<i>yak-ʔo:k</i> 'kill'
<i>xo:k-ik</i> 'be wet'	<i>xo:k</i> 'become wet'	<i>yak-xo:k</i> 'make sth. wet'
<i>ʔutz-ik</i> 'be_full'	<i>ʔutz</i> 'fill (intr.)'	<i>yak-ʔutz</i> 'fill (tr.)'
5. Nonagentive Ambitransitive (Labile) Verbs. S=O		
Derived	Basic	Basic
<i>mutz-ik</i> 'be broken'	<i>mutz</i> 'break (intr.)'	<i>mutz</i> 'break (tr.)'
<i>tüj-ik</i> 'be folded'	<i>tüj</i> 'become folded'	<i>tüj</i> 'fold'

Table 4. (Continued)

6. Agentive Ambitransitive Verbs. S=A			
STATIVE	INCHOATIVE	ACTIVITY (Tr. and Intr.)	CAUSATIVE
Derived	XXX	Basic	Derived
<i>may-ek</i>	XXX	<i>may</i>	<i>yak-may</i>
'be counted'		'count'	'make sb. count'
<i>chi:w²-ik</i>	XXX	<i>chi:w²</i>	<i>yak-chi:w²</i>
'be bathed'		'take a bath'	'make sb. bathe'
<i>juy-ik</i>	XXX	<i>juy</i>	<i>yak-juy</i>
'be bought'		'buy'	'make sb. buy'
<i>kay-ek</i>	XXX	<i>kay</i>	<i>yak-kay</i>
'be eaten'		'eat'	'make sb. eat'

derived. Positional verbs (class 1) and nonagentive ambitransitive verbs (class 5) have the same basic form in two of the alternations. The causative alternation is the derived form for positional verbs, whereas the stative alternation is the derived form for nonagentive ambitransitive verbs. Nominal predicates (class 3) appear derived in the three alternations, although it is clear that the stative and inchoative forms are equipollent since both of them are derived from a nominal root. The causative alternation with nominal and adjectival predicates is formed using the inchoative as a base.

2.1.1

Positionals are the only verb class that conveys both the stative and inchoative alternations using the same basic form.

(38) a. Stative

dejde jumü min=ten-ni:y²-i

from where A2(ABS)=stand_up-PERDUR-INCD

'(Thank you very much dear little father for listening to me) from the place where you are standing.' {rs2/13}

b. Inchoative

?i=tukmüm=xü ?i=ten-ni:y²-i

A3(POSS)=alone=EV A3(ABS)=stand_up-PERDUR-COMD

'It (the tree) stood up by itself.' {milagro/13}

The causative alternation is formed by adding the causative prefix *yak-* to the basic intransitive form.

(39) Causative

tan=yak-ten-ni:y[?]-a:m *jamaj komom*
 A1(ERG)=CAUS-stand_up-PERDUR-IRRI that support
 'I am going to stand up the supports.'

The semantics of the derived forms is predictable from the sum of the meanings of the causative marker and the positional root. Thus, the combination *yak-* + POSITIONAL can be paraphrased safely as 'to cause someone or something to be in a specific position'.

- (40) *yak-pu:xni:y[?]* [CAUS-kneel down] 'make someone to be knelt down'
yak-koxotenni:y[?] [CAUS-kneel down] 'make someone to be knelt down'
yak-kupni:y[?] [CAUS-be squat] 'make someone to be squatted'
yak-pe:xni:y[?] [CAUS-lie on chest] 'put someone face down'

The verb *yak-ju:nni:y[?]* [CAUS-sit] is the only case within my corpus in which the meaning of the derived form does not correspond to the sum of the meanings of the individual morphemes that form the word. *Yak-ju:nni:y[?]* has two meanings. One of them is clearly compositional, 'sit someone down', whereas the other one, 'win in a game, win a fight', is not.

The class of Positionals can be distinguished both formally and semantically. Positionals are the only verbs in the language that take the suffix *-ni:y[?]* 'perdurative' in the three alternations. This suffix indicates that the state predicated by the root is stable for a long period of time. Positionals form a uniform semantic class that conflates information about position or arrangement of an entity and physical characteristics associated with the same entity. The prototypical positions conveyed by these roots are: standing, sitting, lying, leaning, bending down, etc. The physical characteristics encoded by positional roots depict particular shapes or conditions that are visually prominent. The physical characteristics can be either inherent to the entity (human, animal, liquid, two-legged, big, short) or acquired (skinny, fat) by the entity. The three subclasses of positionals given in (41) are established according to the semantic features conflated in the roots. The members of the first set conflate position and physical features, while the members of the second set describe mainly physical characteristics. For instance, the root *te:nkej* of the first set can be used only in a situation in which the standing figure is a skinny human being. The root *ma[?]tz*, of the second set, is used to specify that the person located in space is 'big and fat'. The fact that such a person is standing is inferred from the discourse context. In contrast, the root *ten*, of the third set, is used to describe a situation in which an entity is in an upright position, leaving aside any specification on animacy, weight or shape of the entity involved in such a situation. The stative is the only meaning provided in the glosses below. This does not reflect the fact that

both the stative and the inchoative meanings are attested when the roots occur in their basic forms.

- (41) a. **Position plus physical characteristics:** *te:nkej* ‘be standing (a skinny person)’, *kap* ‘be lying down (a large person)’, *ke?xex* ‘have its wing raised or spread (a bird)’, *kotz+tekek* ‘be leaning on something (a person)’, *paw* ‘be standing (a two-legged entity)’, *kü:y?* ‘be in a puddle (liquid)’, *mokotz* ‘be sitting (a fat person)’, *nu?j* ‘be with head bowed (a somewhat short and fat person)’, *pe:x* ‘be face down, lie on chest (a person)’, *koj+tekek* ‘be leaning (a person)’, *tekek* ‘be standing with the arms at the waist and chest out (a person)’, *we?kek* ‘be standing with legs spread (a person)’, *ku?n* ‘be seated with head bowed (a person)’, *po?xix* ‘be seated sadly (a person)’, *nüp* ‘be bending down (a person)’, *pu?x* ‘be kneeling (a person)’.
- b. **Physical characteristics primarily:** *?awük* ‘be with the mouth open’, *?a:xi+ten* ‘be with the hair straight up’, *?oxow* ‘be ruffled’, *ko?+ma?chi* ‘be hardheaded’, *ko?+wa?tz* ‘be baldheaded’, *ju:yuy* ‘be skinny’, *pakü* ‘be skinny’, *jü:wü?* ‘be thin’, *küm* ‘be big and lumpy’, *püj* ‘be fat’, *püjtzük* ‘be pot-bellied’, *ma?chi?* ‘be stout and big’, *tü:rün* ‘be fat (human), big (tree, pole)’, *ma?tz* ‘be big and bulky’, *monon* ‘be with eyes bulging’, *tejchi* ‘be an entity with a snub-nose’.
- c. **Position primarily:** *chikiw* ‘be hanging on a tree’, *tilin* ‘be hanging’, *chinkoj* ‘be on all fours’, *na:x+pe:x* ‘be chest down, face down’, *jup* ‘be leaning, lay on one’s stomach’, *pam* ‘be standing up’, *ten* ‘be standing up straight’, *tzo:t* ‘be seated’, *ju:n* ‘be seated’, *ko?+ni?t* ‘be crouched down’, *ko?p* ‘be bending down’, *koxo+ten* ‘be kneeling’, *wü?m* ‘be with head lowered’, *mo?tzotz* ‘be curled up’, *ku?nu?tz* ‘be curled up, squatting down’, *kup* ‘be squatting down with the narrowest part up’, *tzu:t?+?ut* ‘be squatting down’, *me?t* ‘be pressed’, *ne?k* ‘be folded’, *ni?t* ‘be crouched’, *xaj* ‘be with the arms (or branches) open’, *xajwa?* ‘be with the arms (or branches) open pointing upwards’, *wenkej* ‘be with the lower extremities open’, *wej* ‘be with the legs spread’.

2.1.2

Verbs derived from adjectives and nouns form two different verb classes. The only difference between them is that adjectives appear underived in their stative form, whereas nouns appear derived when functioning as stative predicates. In (42b), the denominalizer suffix *-?at* derives the noun *?oya?aj+jaykak* ‘good people’ into an intransitive verb that is able to carry both the plural verbal suffix *-küx*, and the completive suffix *-u*. Adjectives and nouns that bear the absolutive proclitic directly attached to them convey permanent properties, conditions or states.

- (42) a. **Adjective**
seme mi=ka:=ʔoya
 very B2(ABS)=NEG=good
 ‘You are very bad.’ {aandc/120}
- b. **Derived Noun**
∅=ʔoya+ʔaj+jaykak-ʔat-küx-u=k
 B3(ABS)=good_people-DNOMI-PL3-COMI=ANIM
 ‘They were good people.’ {olu27/139}

Adjectives and nouns with adjectival function may appear in a second construction followed by a copula. In this construction, the copula bears the pronominal proclitic and aspectual suffixes. The adjective-plus-copula construction expresses temporary states or conditions that are not inherent but acquired by the subject.

- (43) a. **Adjective: Temporary State**
ʔoya tan=ʔit-i:-t
 good A1(ABS)=COPULA:be-INCD-PL.SAP
 ‘We are fine.’ {rs2/47}
- b. **Noun with Adjective Function: Acquired Condition**
ʔajchi=k ʔi=ʔit-nü-e
 older_brother=ANIM A3(ABS)=COPULA:be-already-INCD
 ‘He is already old.’ {rsch1/161}

Adjectives and nouns derived by the inchoative suffix *-ʔi:yʔ* become change of state verbs. The verb in (44a) is derived from a noun, whereas the one in (44b) is derived from an adjective.

- (44) a. *yaʔ+mü min=naʔw-ʔi:yʔ-aʔn*
 here A2(ABS)=old_man-INCH-IRRD
 ‘You are going to get old here.’ {olu28/180}
- b. *ʔi=ʔoya-ʔi:yʔ-i=k pi:nak*
 A3(ABS)=good-INCH-COMD=ANIM a_little
 ‘He got a little bit better.’ {aandc/64}

Adjectives and nouns require the inchoative suffix when they are turned into causative verbs. Hence, in the causative form of these verbs, both the causative, *yak-*, and the inchoative, *-ʔi:yʔ*, co-occur with adjectival or nominal roots.

- (45) a. **Stative (Adjective)**
naʔkxej tüʔtz ʔi=ʔit-nü-e
 when dry A3(ABS)=COPULA:be-already-INCD
 ‘When (the seeds) are already dried [...]’ {olu1/225}

b. Inchoative

$\emptyset=tü^{?}tz-?i:y^{?}-u$ *kay+an*
 B3(ABS)=dry-INCH-COMI food
 ‘The food dried out.’

c. Causative

$pa^{?}ko$ *tax=yak-tü^{?}tz-?i:y^{?}-i* *wew+na^{?}kxej*
 a_lot C1(ERG)=CAUS-dry-INCH-INCD then
 ‘I used to dry a lot (of hot peppers) in those days.’ {lm3/579}

The following are additional examples of derived inchoatives in the causative alternation.

- (46) a. *mix=yak-tu:ntu-?i:y^{?}-i* *ja^{?}*
 C2(ERG)=CAUS-stupid-INCH-COMD 3ANIM
 ‘You deceived him.’ {rs6/72}
- b. *?i=yak-jiki-?i:y^{?}-u=k* *?i=tuku*
 A3(ERG)=CAUS-dirty-INCH-COMI=ANIM A3(POSS)=cloth
 ‘He got his clothes dirty.’
- c. *tan=yak-nü:-?i:y^{?}-u* *ya^{?}aj* *?ak* *nü:-je^{?}+mü* *porke*
 A1(ERG)=CAUS-water-INCH-COMI this cord water-LOC because
 $\emptyset=pakpak-^{?}at-u$
 B3(ABS)=stiff-DNOMI-COMI
 ‘I got the cord wet in the water because it was stiff.’ {AA/2000}

2.1.3

Nonagentive Intransitive Verbs are a special semantic and formal class in Olutec. These verbs appear underived in the inchoative alternation, i.e., when they convey the change of state, condition or location of the only participant involved in the clause. The set of verbs within this class expresses events that are likely to happen without the presence of an external causer (Haspelmath 1993: 103). As any other intransitive verb, they are prefixed by the absolutive proclitic and followed by an aspectual suffix. When the verb is part of an independent clause with incompletive aspect, the suffix *-pa* follows the root, (47b). Under the same conditions, transitive verbs take the suffix *-pe*.

- (47) a. *min-^{?}o:k-a^{?}n+e-:t*
 A2(ABS)=die-IRR-PL.SAP
 ‘You (pl.) are going to die.’ {rspf2/29}
- b. *ta=xo:k-nü-pa*
 B1(ABS)=be_wet-already-INCL.I
 ‘I am already getting wet.’ {piojo/130}

Intransitive nonagentive verbs exhibit two formal properties that are not shared by agentive (activity) ambitransitive verbs (e.g. *yoxetun* ‘work’, *ʔetz* ‘dance’, *tun* ‘do’, *piyüʔk* ‘run’, etc.) First, nonagentive verbs may appear with their subject incorporated, whereas the subject of agentive verbs (verb-class 6) never incorporates. Example (48a) illustrates Type I Noun Incorporation (Mithun 1984) where the nominal expressing the subject, *nü*: ‘water’, incorporates to the intransitive verb *ʔawkompet* ‘grow’ forming a N+V compound. Example (48b) illustrates Type II Noun Incorporation, also known as External Possessor by Noun Incorporation (Zavala 1999). Note that when the possessum of the subject incorporates, the semantic possessor stands as the only core argument of the clause.

- (48) a. **Type I NI (Compounding)**
nü:-ʔaw+kom-pet-pa
 water-grow-DIR:upwards-INCL.I
 ‘The stream is swelling up.’
- b. **Type II NI (External Possessor)**
ta=puʔpu-ye:k-u
 B1(ABS)=belly-grow-COMI
 ‘My belly grew.’ (Lit. ‘I belly-grew.’) {C19/65}

And second, nonagentive intransitive verbs have to be derived by a causative or an applicative marker to form transitive verbs. The derived verb carries an ergative proclitic and takes the incomplete suffix for transitive verbs, *-pe*, in independent clauses.

- (49) a. **Intransitive (Nonagentive Change of State)**
 $\emptyset = ʔo:k-pa=k$ *majaw*
B3(ABS)=die-INCL.I=ANIM woman
 ‘The woman is dying.’ {deaa/211}
- b. **Causative**
 $ʔi=yak-ʔo:k-nü-pe=k$ $ʔi=ʔi:tzümü$
A3(ERG)=CAUS-die-already-INCL.T=ANIM A3(POSS)=pig
 ‘He is already killing his pig.’ {olu3/125}
- c. **Associative Applicative**
jeʔ yoʔjwa ʔi=mü:-ʔo:k-nü-w *jaʔ jeʔ*
 that man A3(ERG)=ASSOC-die-already-COMI 3ANIM that
ʔi=majaw jeʔ ko:xo
 A3(POSS)=woman that day
 ‘That man died together with his wife that day.’

d. Reason/Instrumental Applicative

ʔi=toj-ʔo:k-nü-w *jaʔ* *so:nya porke*
 A3(ERG)=INST-die-already-COMI 3ANIM Sonia because
ʔi=kay-u=k *ʔan+pa+ni:wi*
 A3(ERG)=eat-COMI=ANIM poison
 ‘Sonia died because she ate poison.’

(50) a. Intransitive (Nonagentive Change of Location)

wew-pi *tan=kama-pi* *∅=pitzüm-pa=k*
 there-LOC A1(POSS)=corn_field-LOC B3(ABS)=exit-INCL.I=ANIM
tuk jaytzuʔ
 one deer
 ‘A deer is coming out from there, from my cornfield.’ {olu2/15}

b. Causative

ʔonde ʔi=yak-pitzüm-pe=k *me:nyu jeʔ+miü*
 where A3(ERG)=CAUS-exit-INCL.T=ANIM money there
 ‘He takes the money out from there.’ {aand/823}

c. Associative Applicative

jeʔ=k *tan=mü:-pitzüm-pe* *yoxe+tun-pa+ʔ*
 that=ANIM A1(ERG)=ASSOC-exit-INCL.T work-NF
 ‘I go out with him to work.’ {olu28/39}

d. Instrumental Applicative

jeʔ seme jokchik ʔi=toj-pitzüm-pe *chupi:pi*
 that very tasty A3(ERG)=INST-exit-INCL.T chupipi
 ‘That (sauce) comes out pretty tasty with the chupipi root.’ {C9/36/384}

In contrast, agentive ambitransitive verbs do not require further derivation when occurring in intransitive and transitive constructions.

(51) a. Intransitive (Agentive/activity)

∅=ʔetz-pa *jaʔ*
 B3(ABS)=dance-INCL.I 3ANIM
 ‘He is dancing.’ {rsch2/662}

b. Transitive (Agentive/activity)

ku:mwya ʔi=ʔetz-küx-pe
 cumbia A3(ERG)=dance-PL3-INCL.T
 ‘They are dancing cumbia.’ {vg/652}

Derived non-agentive causative verbs such as *yak-ʔo:k* ‘kill (CAUS-die)’ as well as basic agentive ambitransitive verbs such as *ʔetz* ‘dance’ may incorporate their patient. In Type I NI, the incorporated patient is non-referential. The result is an in-

transitive clause with the semantic agent as the only clausal core argument. When the patient incorporates, the semantic agent is signaled by the absolutive proclitic on the verb, instead of the ergative proclitic, which is the pattern attested when the verb is transitive. An additional indication that the verb in incorporated constructions is intransitive is provided by the fact that the sequence N+V takes the incompletive suffix for intransitives, *-pa*, as in (52a). The incorporated noun is always placed immediately before the verb root, hence, in (52a), which is a derived intransitive, the incorporated noun appears between the causative prefix, *yak-*, and the intransitive root, *ʔo:k* ‘die’.

- (52) a. **Type I NI. Patient incorporates to a derived causative verb**
∅=yak-ʔi:tzümü-ʔo:k-küx-pa=k
 B3(ABS)=CAUS-pig-die-PL3-INCL.I=ANIM
 ‘They kill pigs (i.e., They are butchers).’ {vg2/405}
- b. **Patient incorporates to an agentive transitive verb**
ta+ʔut+ü+pa ʔü:tz tan=ʔam-ʔetz-e
 I_like I A1(ABS)=huapango-dance-INCD
 ‘I like to dance huapango.’ {C10/6/1}

Nonagentive verbs are derived by the participle suffix *-Vk* to form stative predicates. Derived stative predicates may bear the pronominal proclitic directly attached to them to form equational sentences, as shown in (53a). Otherwise, the stative predicate is followed by a copula that bears the absolutive proclitic and aspect, (53b). Stative predicates before the copula convey properties or conditions acquired by the subject as a result of another event.

- (53) a. *ta=ʔo:k-ik ʔü:tz*
 B1(ABS)=die-PTCP I
 ‘I am a dead person.’ {olu6/162}
- b. *mi:tz juxtükmi ʔo:k-ik*
 you day_after_tomorrow die-PTCP
min=ʔit-nü-e
 A2(ABS)=COPULA:be-already-INCD
 ‘You are going to be dead the day after tomorrow.’ {compa/57}

The following is an extensive list of intransitive nonagentive verbs that exhibit the features discussed above. The stative and causative forms of the verbs are derived from the inchoative form. Most of the verbs within this class express the change of state or condition of a patient. The other smaller semantic subclasses are labeled following a modified version of the classification of verbs proposed by Levin and Rappaport Hovav (1995): a) verbs of change of state or condition; b) verbs of ap-

pearance, disappearance, existence; c) verbs of emission (substance, light, sound, smell); d) verbs of motion or change of location; and e) phase verbs.

- (54) a. **Verbs of change of state or condition:** *ʔanpakuj* ‘be angry, in a bad mood’, *kimum* ‘go crazy’, *moʔt* ‘become crazy’, *moʔw* ‘become deaf’, *koʔtak* ‘go bald’, *ʔawmaʔkx* ‘get something stuck sideways in the throat’, *kon* ‘shorten, shrink’, *kuʔxux* ‘catch a cold (the chickens)’, *kuj* ‘hurt’, *kü:wʔ* ‘get cooked’, *maʔtzkaʔ* ‘fall down’, *majaw* ‘ripen’, *ʔo:k* ‘die’, *ʔutz* ‘become full’, *ʔuyuk* ‘become crooked’, *puʔkx* ‘ripen, gain color’, *pu:tzʔ* ‘rot’, *püj* ‘burst’, *pük* ‘ache, hurt’, *ta:y* ‘slip’, *tza:mʔ* ‘ripen, get fat’, *tzeʔk* ‘become wrinkled’, *tzutz* ‘become narrow’, *wakx* ‘spread’, *chaʔm* ‘become pale’, *jiʔkx* ‘drown in the water’, *joʔn* ‘loosen’, *muj* ‘change color’, *muk* ‘get together’, *mup* ‘go numb’, *pak* ‘spread out’, *xo:k* ‘get wet’, *yon* ‘lengthen, stretch’, *xo:tz* ‘wither’, *xux* ‘go numb’, *xuxum* ‘go numb’, *ye:k* ‘grow (a person, the grass)’, *yom* ‘boil’, *yopop* ‘pile up, stir up’, *yo:tz* ‘evaporate’, *ʔa:tz* ‘for a vine to grow’, *kom* ‘grow’, *ʔumum* ‘bud’, *ʔi:k* ‘expand’, *jokox* ‘heat’, *jaj* ‘become hot’, *pakik* ‘become cold’, *toy* ‘become hot, burn’, *xe:m* ‘become cold’, *tux* ‘become cold’, *ma:jʔ* ‘sleep’, *jutuk* ‘wake up’, *miʔkx* ‘blink’, *mon* ‘calm down’, *wüʔm* ‘nod off like when one is falling asleep’
- b. **Verbs of appearance, disappearance and existence:** *ʔawʔixe:p* ‘spill’, *chiʔt* ‘come up (like flowers)’, *jo:y* ‘lose’, *keʔx* ‘be born, appear’, *mux* ‘germinate, be born’, *yüʔk* ‘be born, get ready’, *naxkaʔ* ‘vanish, wrinkle’, *pey* ‘evaporate, dry up (water)’, *piʔtz* ‘extinguish, darken’
- c. **Verbs of emission (light, sound, smell and substance):** *ʔawtüʔkx* ‘shine’, *tza:yʔ* ‘illuminate, roast’, *yeʔk* ‘lightning’, *likiw* ‘sound the rattle’, *lokot* ‘make noise of boiling water, noise of the stomach when one has diarrhea’, *pimim* ‘thunder (thunder), crack, sound of water pouring’, *rrütüt* ‘squeak’, *toroʔkx* ‘produce cracking noise’, *tzukuk* ‘grunt, squeek’, *xikiw* ‘produce a sound the rattle’, *xopop* ‘produce a lot of noise upon falling (of water)’, *ʔawʔuxup* ‘spill (water)’, *ʔe:m* ‘fester, become large (a pimple with pus)’, *ʔo:p* ‘produce foam’, *jo:m* ‘sweat’, *ki:xʔ* ‘swell’, *jukuk* ‘stink’, *ʔawoʔ* ‘yawn’, *jetiʔktz* ‘sneeze’, *muʔt* ‘spout’, *pomom* ‘steam’, *pü:t* ‘bleed’, *xejej* ‘pant’
- d. **Motion verbs (change of location):** *ʔüxkü:m* ‘fall’, *jamat* ‘arrive at another place’, *ke:kʔ* ‘get out, move’, *mi:nʔ* ‘come’, *nükx* ‘go’, *pitzüm* ‘exit’, *po:yʔ* ‘flee’, *rrü:w* ‘go up and come down (kite), swarm (bees)’, *tij* ‘stay’, *yaʔt* ‘arrive here (from there to here)’
- e. **Phase verbs:** *ʔixʔi:yʔ* ‘begin’, *koʔpitzüm* ‘finish’, *küx* ‘finish’, *po:x* ‘delay, last’

The gloss of the causative form is semantically very transparent and predictable. The paraphrase ‘somebody makes something or someone change its/her state, position or condition’ is a good gloss in most of the cases. The same gloss is obtained when the causee is volitional. Thus, the causative verb *yak-jamat* means ‘make someone arrive at another place’. I have only found one case within my corpus in which the meaning of the derived verb is not entirely compositional. In the case of, *yak-keʔx* [CAUS-appear], one would expect to have the meaning ‘make something appear’, but instead the meaning of this causative verb is ‘declare, pronounce’.

2.1.4

The set of *Nonagentive Ambitransitive Verbs* consists of change of state verbs and nontranslational motion verbs that show the same form in the inchoative and the causative alternations. These types of verbs are also known in the literature as labile verbs (cf. Haspelmath 1993). The set of verbs within this group encodes events that may occur spontaneously without an external cause or with equal possibility instigated by an external cause. When nonagentive ambitransitive verbs follow the transitive pattern, they include a cause that is responsible for the change of state of the affected patient. The nonagentive ambitransitive verb in the intransitive pattern excludes a causing agent and presents the event as occurring spontaneously. Hence, the object of the transitive form and the subject of the intransitive form convey the same semantic role. In the inchoative alternation, the verb bears the absolutive proclitic and the incompletive for intransitives *-pa*. In contrast, in the causative alternation the verb bears the ergative proclitic and the incompletive for transitives *-pe*. As an illustration consider the change of state verb *jik* ‘become dirty/make sth. dirty’ which appears in its basic form when functioning as either intransitive or transitive.

- (55) a. $\emptyset=jik-pa$ *seme tuk*
B3(ABS)=become_dirty-INCL.I very one
 ‘One gets very dirty.’ {olu28/522}
- b. $?i=jik-pe$ *kay+an*
A3(ERG)=make_dirty-INCL.T food
 ‘He is making the food dirty.’ {aand/114}

The same pattern is found with nontranslational motion verbs, i.e., verbs that convey the motion of an entity without changing its overall position (Talmy 1985; Kemmer 1993). Thus, the entity that moves in the inchoative alternation (the “S”) corresponds to the entity that is moved in the causative alternation (the “O”). Compare the following pair of examples that include the nontranslational verb *jaweʔt* ‘shake, move staying in the same location’.

- (56) a. **Inchoative**
je[?]=k majaw seme=koj=k ?i=yuk-jawe[?]t-e
 that=ANIM woman very=just=ANIM A3(ABS)=UP-shake-INCD
 ‘That woman moves up and down quite a lot.’ {rsch2/146}
- b. **Causative**
tan=jawe[?]t-kay-pe puna:tu
 A1(ERG)=shake-ITERAT-INCL.T plate
 ‘I am stirring the food.’ {C20/55}

Nonagentive ambitransitive verbs follow the same noun incorporation pattern of nonagentive intransitive verbs (class 4). The subject of intransitive nonagentive ambitransitive verbs may be incorporated. The example in (57) illustrates a case of Type II NI (External Possessor) in which the head of the possessed nominal phrase incorporates and the possessor occupies the syntactic slot assigned to the subject.

- (57) *mi=kü[?]-mutz-u*
 B2(ABS)=hand-break-COMI
 ‘Your hand broke.’

Nonagentive ambitransitive verbs in the causative alternation are similar to transitive activity verbs (class 6) in that they may participate in reflexive/reciprocal, passive, and object incorporation constructions. In reflexive/reciprocal constructions, the prefix *ni-* occurs directly attached to the root and the verb follows the inverse pattern.

- (58) a. **Reflexive of Nonagentive Ambitransitive Verb**
ø=ni-jik-nü-ü-pa=k je[?]
 B3(ABS)=RFLX-get_dirty-already-INV-INCL.I=ANIM that
?i=tuku-pi
 A3(POSS)=cloth-LOC
 ‘He is already shitting in his own clothes.’ (Lit. ‘He makes himself dirty in his clothes.’) {rp3/380}
- b. **Reciprocal of Transitive Activity Verb**
mü:t ø=ni-ka:x-küx-ü-w=ak je[?] yo[?]jwa-tük
 and B3(ABS)=RECIP-COMB-PL3-INV-COMI=ANIM that man-PL
 ‘And the men combed each other.’ {rsch2/257}

Both nonagentive ambitransitive verbs and agentive ambitransitive verbs may be passivized by the prefix *yak-*. Three facts show that passive constructions are intransitive. First, the passivized verb takes the incomplete for intransitives, *-pa*. Second, the absolutive proclitic cross-references the patient, which is the only core

argument of the clause. And third, the agent of the active counterpart may no be expressed by an overt nominal and may not be cross-referenced on the verb by plural agreement or pronominal proclitics.

- (59) a. **Passive of Nonagentive Ambitransitive Verb**
naʔkxi=koj *ø=yak-mo:t-pa* *jeʔ*
 before=just B3(ABS)=PASS-break_dried_thing-INCL.I that
 ‘It (the dried corn) used to be broken into small pieces (ground).’
 {aandc/410}
- b. **Passive of Agentive Ambitransitive Verb**
mi=yak-jan-u=koj
 B2(ABS)=PASS-lie-COMI=just
 ‘You were deceived.’
 {pesca/239}

Both nonagentive ambitransitive verbs in their causative form and agentive ambitransitive verbs may incorporate their object. The two examples in (60) illustrate Type II NI (cf. 2.1.3). In both examples the possessum of the patient is incorporated, whereas its possessor is expressed by the absolutive proclitic on the verb showing that it is occupying the direct object slot.

- (60) a. **Type II NI with Nonagentive Ambitransitive Verb**
taʔnük+kuʔku *ta=küʔx-toʔkx+kot-ü-pa*
 cramp B1(ABS)=foot-bend-INV-INC.I
 ‘The cramp is making my foot bend.’
- b. **Type II NI with Agentive Ambitransitive Verb**
mejor=ak *min=wintoj-ʔe:p+pük-küx-i-j*
 better=ANIM A2(ABS)=face-look_at-PL3-INCD-INVD.I
 ‘They better look at your face.’
 {C21/77/21}

Nonagentive ambitransitive verbs share the same derived stative form with nonagentive intransitive verbs (class 4) and agentive ambitransitive verbs (class 5). The verbal root is derived by the participle suffix *-Vk*. In stative constructions, the derived form does not carry pronominal proclitics or aspectual markers. Instead, the copula *ʔit* ‘be’ bears these markers.

- (61) a. *jaʔ=k* *jeʔ* *ʔi=majaw* *kujum-ik*
 3ANIM=ANIM that A3(POSS)=woman become_sick-PTCP
ø=ʔit-pa
 B3(ABS)=COPULA:be-INCL.I
 ‘His wife is sick.’
 {rs8/63}

- b. *je[?]+mü* *ʔi=ʔit-i* *ko:+jo[?]kx-ek*
 there A3(ABS)=COPULA:be-INCD hook-PTCP
 ‘It is hooked there.’ {rspfl/572}
- c. *∅=jawe[?]t-ek* *ʔi=ʔit-nü-i*
 B3(ABS)=MOVE-PTCP A3(ABS)=COPULA:be-already-INCD
 ‘It is already moved.’

The list of the most common nonagentive ambitransitive verbs that exhibit the same form in the causative and inchoative alternations is given in (62). The verbs are grouped in five different semantic subclasses. The first subclass includes the different types of breaking and splitting verbs. The second subclass includes verbs of opening, closing and covering. The third and fourth subclasses include the verbs of change of configuration and change of state. And finally, the sixth subclass includes the verbs of nontranslational motion.

- (62) a. **Break verbs:** *je[?]k* ‘split logs’, *kü:tz* ‘break, split’, *mo:t* ‘break dry things’, *woj* ‘break off’, *je[?]tz* ‘remove, snap (corn), pull off’, *ti[?]kx* ‘snap something rigid (small stick, tree)’, *mutz* ‘break (fragile things)’, *pot* ‘break, burst’, *pu[?]x* ‘crumble’, *way* ‘crumble (the floor, waste from a tree or from wood)’, *papx* ‘snap, break (a branch of a tree)’, *pu[?]* ‘split, crack’, *tza[?]px* ‘split wood’, *tze[?]px* ‘crack into little pieces (wood)’
- b. **Open/close/cover verbs:** *ʔawtzo[?]* ‘cover, close’, *nu[?]x* ‘cover with something with two dimensions (e.g. rag)’, *jot* ‘open, make a hole’, *kaj* ‘bar up’
- c. **Change of configuration verbs:** *ʔixit* ‘spread out, scatter’, *wiw* ‘spread out, spill, scatter’, *xit* ‘spread out, spill, disperse’, *ji:tz* ‘untie, get loose’, *kej* ‘untie, unwrap’, *wüj* ‘untie’, *ne[?]k* ‘fold’, *tüj* ‘fold’, *nu:t* ‘wrinkle’
- d. **Change of state verbs:** *jik* ‘be/make dirty’, *kujum* ‘injure, hurt’, *mot* ‘be/make sth. salty, curse’, *tzet* ‘burst, crush, squash’, *tzü:kx* ‘roast (coffee), to toast (tortilla)’, *xo:x[?]* ‘cook in water’
- e. **Nontranslational motion:** *jawe[?]t* ‘shake, move’, *xipx* ‘turn over’, *pitit* ‘turn’, *yo:m* ‘mix’, *yüx* ‘shake, sway’, *ʔe:m* ‘stretch’, *kit* ‘bend, twist’, *maj* ‘turn upside down (pot, dish)’, *ʔo:y* ‘bend’, *we:n* ‘stretch’

2.1.5

The set of *Agentive Ambitransitive Verbs* consists of predicates that may occur in intransitive and transitive clauses without derivation. Unlike nonagentive ambitransitive verbs, the argument structure of agentive ambitransitive verbs includes a semantic agent in both intransitive and transitive clauses, i.e., the semantic role of the “S” of the intransitive verb corresponds to the semantic role of the “A” of the transitive counterpart. For instance, the verb *kay* ‘eat’ appears in its basic form in

both intransitive and transitive clauses. The subject of both forms corresponds to the eater. The “S” in (63a) is marked by the absolutive, whereas the “A” in (63b) is marked by the ergative. The incompletive aspect is marked by *-pa* in the intransitive and by *-pe* in the transitive.

- (63) a. *porke ta=kɑ:=kay-pɑ:-t*
 because B1(ABS)=NEG=eat-INCLI-PL.SAP
 ‘We don’t eat.’ {rs1/53}
- b. *ʔasta tan=kay-pe mixtun*
 even A1(ERG)=eat-INCLI.T cat
 ‘I even eat cats.’ {rs2/86}

As discussed above, agentive ambitransitive verbs show all the properties associated with canonical transitive verbs. They can co-occur in reflexive/reciprocal constructions, (58b), they can be passivized, (59b), and they can incorporate their objects, (60b).

The stative form of agentive verbs is derived by the participle suffix *-(V)k*. In the stative construction the copula carries both the pronominal proclitic and an aspectual marker.

- (64) a. *yujʔ-ik ʔi=ʔit-nü-e kama*
 prune-PTCP A3(ABS)=COPULA:be-already-INCD field
 ‘The field is already cleared out.’ {desob/122}
- b. *may-ek=koj ʔi=ʔit-küx-i yaʔ-tük*
 count-PTCP=just A3(ABS)=COPULA:be-PL3-INCD this-PL
 ‘They have been counted.’ {id3/226}

Agentive ambitransitive verbs do not exhibit the inchoative alternation since none of these verbs in their intransitive form conveys a change of state, location or condition of its only core argument.

The causative alternation for agentive ambitransitives is based on the intransitive form that does not include a patient as a core argument. The derived verb conveys an event in which a causer instigates the causee (an agent) to perform an activity. The derived predicate is monotransitive. The causer is marked by the ergative proclitic, and the verb bears the incompletive suffix *-pe*, (65a). The ill-formed structure in (65b) shows that the patient may not be expressed as a syntactic argument, i.e., the causative *yak-* may only derive intransitive verbs into monotransitive ones. (Cf. 3.2 for the possibility of having the semantic patient in this type of causatives.)

- (65) a. *mü:t tan=yak-kay-pe pek jaʔaj*
 and A1(ERG)=CAUS-eat-INCL.T trully 3ANIM
 ‘And I feed him.’ {aand/117}
- b. **tan=yak-kay-pe jaʔaj nü:n*
 A1(ERG)=CAUS-eat-INCL.T 3ANIM tortilla
 (Intended reading: ‘I am making him eat tortillas.’)

The following is an extensive list of the most common agentive ambitransitive simple verbs. The verbs are grouped in semantic subclasses, some of which exhibit syntactic correlates that are not going to be discussed here.

- (66) a. **Verbs of saying and speaking:** *ʔampiw* ‘tell, explain, talk about something’, *ʔawtumatz* ‘imitate’, *ʔawtzow* ‘answer, respond’, *kapx* ‘speak’, *meʔmeʔmti:yʔ* ‘speak a foreign language; speak as a baby’, *nüim* ‘say’, *koʔtzow* ‘ask for’, *tze:k* ‘scold’
- b. **Verbs of contact:** *ʔawpa:t* ‘kiss’, *tzu:kx* ‘kiss’, *chip* ‘scratch’, *kitz* ‘scratch’, *jep* ‘scrape’, *jun* ‘scrape’, *chi:wʔ* ‘bathe (to use/apply liquid)’, *jipin* ‘scrub’, *jütz* ‘grind, scrape, brush, rub’, *ka:x* ‘comb’, *ke:px* ‘scratch, shave’, *kow* ‘drum’, *kox* ‘hit (with the fist)’, *kup* ‘puncture’, *mapx* ‘shoot’, *poj* ‘kick’, *we:y* ‘lick’, *pokx* ‘knock (door), to play (ex. marimba, drum)’, *wop* ‘beat, hit, drum, strike a blow’, *wo:k* ‘play a stringed instrument, scratch’
- c. **Verbs of cutting:** *kaʔtz* ‘cut into pieces’, *jü:t* ‘saw’, *ket* ‘cut the tortilla in half’, *ketz* ‘cut (with a machete)’, *tuk* ‘cut (coffee, fruit)’, *tzuk* ‘cut (with a knife)’, *tzukx* ‘cut (with scissors)’
- d. **Cognate object verbs:** *ʔawwoʔ* ‘open the mouth, yawn’, *ʔetz* ‘dance’, *ʔojoʔ* ‘cough’, *ʔü:tz* ‘throw up’, *chi:xʔ* ‘fart’, *juʔk* ‘smoke’, *jüyta:kʔ* ‘play, shout’, *jü:kx* ‘breathe, roar, bray, snore’, *ta:tzʔ* ‘urinate’, *tü:nʔ* ‘shit’, *tzuj* ‘spit’, *tzi:t* ‘whistle’ *wi:k* ‘whistle’, *xu:xʔ* ‘play (a musical instrument), whistle’, *muʔ* ‘blow the horn, whistle using the hands as an instrument’, *xej* ‘exhale, breath deep, pant, moan’, *xi:kʔ* ‘laugh’, *ya:xʔ* ‘sing, scream, bark’
- e. **Verbs of motion and manner:** *ʔe:kx* ‘limp’, *piyüʔk* ‘run’, *waʔk* ‘walk quickly’, *we:tz* ‘crawl’, *wit* ‘walk, stroll, to walk on something’, *yokx* ‘jump, jump up and down’, *tü:y* ‘sway, rock, swing’, *yun* ‘swim’
- f. **Verbs of carrying:** *ʔix* ‘carry a child, watch’, *kap* ‘carry (on the shoulder)’, *ke:tz* ‘pick up (dirt)’, *kü:yʔ* ‘carry on the head’, *meʔpx* ‘carry holding in arms’, *tzüm* ‘carry (on the back, shoulder)’
- g. **Verbs of consumption:** *kay* ‘eat’, *ʔok* ‘chew’, *ʔu:k* ‘drink’, *jü:n* ‘swallow’, *mukx* ‘bite’, *tzuʔtz* ‘bite’

- h. **Verbs of transaction:** *to:k* ‘sell’, *tzo:kʔ* ‘pay’, *juj* ‘buy’, *yak* ‘give, let, offer’
- i. **Verbs of catching and grabbing:** *koʔpx* ‘catch’, *matz* ‘grab with the hands’, *mek* ‘pick up to make piles’, *mi:kx* ‘milk, squeeze’
- j. **Verbs of working activities:** *yoxetun* ‘work’, *puj* ‘wash’, *ki:p* ‘clean’, *je:p* ‘fish’, *tüpx* ‘twist rope’, *xuy* ‘sew’, *taj* ‘hoe, dig’, *mo:tz* ‘wrap (tamales)’, *mü:kʔ* ‘make tamales’, *kü:t* ‘grind grains’, *moʔtz* ‘grind with a mortar’, *püʔkx* ‘make tortillas by patting the dough, slap’
- k. **Verbs of throwing, pushing, pulling and pressing:** *tzak* ‘throw, send’, *ton* ‘push’, *na:w* ‘throw, push’, *tuj* ‘throw, shoot (with a rifle)’, *wotz* ‘pull’, *tu:tʔ* ‘put’, *wü:n* ‘pull, ring the bell’, *nüʔtz* ‘to press’, *po:tz* ‘hug, press’
- l. **Others:** *ʔawʔix* ‘wait’, *ʔawmotow* ‘listen’, *motow* ‘listen’, *chikx* ‘take care’, *jan* ‘trick, lie’, *kipx* ‘measure, weigh’, *pa:t* ‘reach, find’, *ja:yʔ* ‘write’, *may* ‘count’, *koy* ‘paint’, *naʔtz* ‘paint’, *tun* ‘do, make’, *pük* ‘take, get’, *wa:nʔ* ‘want, wish’

Notice that the paradigm of Olutec agentive ambitransitive verbs includes many of the activity verbs that in other languages are agentive intransitives. In Olutec, cognate object verbs, (66d), and motion and manner verbs, (66e), may be part of transitive constructions without further derivation. The object in transitive constructions with these two types of verbs is usually a nominalized form cognate with the verbal root, (67a), or a nominal expressing an affected location, (67b).

- (67) a. ʔi=juʔk-an=xü=k ʔi=juʔk-pe
 A3(POSS)=smoke-NOMI=EV=ANIM A3(ERG)=smoke-INCL.T
 ‘He is smoking his cigar.’ {rsch/1346}
- b. tan=yokx-tuk-u jeʔ ka:ye-tük
 A1(ERG)=jump-DIR:ACROSS-COMI that street-PL
 ‘I jumped those streets.’ {aand/546}

3. More on morphological causatives

The discussion above leads us to distinguish two major ways in which the notion of causation is encoded on the verb. First, the notion of causation is coded by a verbal affix that increases the verb valency and introduces a causer. Five verb classes are obligatorily derived by the prefix *yak-* to create a causative verb (classes 1, 2, 3, 4 and 6). Second, the notion of causation is sublexical. Verbs of class 5 (nonagentive ambitransitive) do not have to be derived to express a causative event since their transitive use already contains a cause in their underived form. In the majority of

cases the meaning of the causative form is entirely predictable by adding the notion of cause to the meaning of the intransitive verb. All causative verbs are monotransitive verbs. In this section I will discuss three different constructions where the morpheme *yak-* is involved and that do not follow the canonical patterns sketched above. The first set of constructions includes *yak-* as a morphological causative for nonagentive ambitransitive verbs (class 5), i.e., verbs that include the notion of cause as part of the lexical meaning in their transitive use. The second set of constructions involves the use of *yak-* as a causative marker for verbs with incorporated patient, i.e., the derived form includes three semantic participants. And the third set of constructions involves the use of *yak-* not as a causative marker but as a passive marker. The development of *yak-* into a causative and a passive marker is discussed.

3.1 The causative *yak-* with nonagentive ambitransitives

Nonagentive ambitransitive verbs, such as the ones listed in (62), are the only verbs that are inherently causatives in their underived form, i.e., the notion of cause is already coded lexically and for this reason no causative morphology is required in the transitive counterpart. The inchoative and causative forms are both basic. Compare the following pairs:

- (68) a. $\emptyset = pu^2-u$ $tan = yu^?k-?unak$
 B3(ABS)=split-COMI A1(POSS)=pot-DIM
 ‘My little pot broke.’
- b. $je^? = k$ $?i = pu^2-pe = k$ $küp+i$
 that=ANIM A3(ERG)=split-INCL.T=ANIM firewood
 ‘He is splitting the wood.’ {lm4/600}
- (69) a. $?i = pot-i = k$ $jamaj = k$ $?i = ?e:m+e$
 A3(ABS)=break-COMD=ANIM that=ANIM A3(POSS)=string
 $?i = wo:k+an$
 A3(POSS)=guitar
 ‘That string of his guitar broke.’ {rsch2/673}
- b. $ta = pot-tuk-i = k$ $?i = tu^?tz+ta$
 C3(ERG)=break-DIR:ACROSS-COMD=ANIM A3(POSS)=tail
 ‘He (a mouse in a cartoon) pulled out his tail.’ {rsch2/675}
- (70) a. $je^? kuy min = ka^?tz-am-e^?$ $?i = ka = papx-a^?n$
 that stick A2(ERG)=cut-IRRI-NOMI A3(ABS)=NEG=snap-IRRD
 ‘Hopefully that stick you are going to cut doesn’t break.’ {compa/84}

- b. *ta=papx-tuk-i=k* *?i=tu?tz+ta*
 c3(ERG)=snap-DIR:ACROSS-COMD=ANIM A3(POSS)=tail
 ‘He snapped his tail.’ {rspf1/54}

The forms in (b) convey direct causative events that resulted in the change of state of the patient. The inanimate patient involved in this situation did not offer any resistance to the event being accomplished. The set of non-agentive ambitransitive verbs may be marked by the causative *yak-* when the portrayed situation involves a series of circumstances that make it difficult for the event to take place. The impediments encountered by the agent to change the state, condition or location of the patient can be due to the inherent qualities of the patient or other circumstances happening during the event portrayed by the verb. For instance in the fragment of a story shown in (71), the speaker uses the derived verb *yak-pot* ‘cause to break’ and not the basic form *pot* ‘break’, to portray a situation where a tiger is unable to snap the rope that its captor used in order to tie him. Once his captor (the rabbit) is sure that the tiger is unable to escape, he gets a knife and kills him.

- (71) a. ‘The tiger was trying to untie itself but it couldn’t.’
 b. *?i=ka:=yak-pot-u=k* *tüpx+i*
 A3(ERG)=NEG=CAUS-break-COMI=ANIM rope
 ‘It wasn’t able to break the rope.’
 c. ‘At that time the rabbit got its knife and killed the tiger.’ {koya/81-3}

The fragment in (72) comes from a story of a man who was trying to hunt a deer that no other hunter had been able to kill. As part of his efforts to capture the deer, the man of the story dresses up as a female deer and tries to act and move in the way female deer do. The hunter thinks that the male deer will be particularly interested in him if he twists his rear end. In the example shown below the presence of the causative indicates that the hunter consciously twists the lower part of his body in a way that is particularly marked for humans. After his performance, the hunter is able to capture the deer.

- (72) *?i=xutu-na?aw ta=yak-?o:y-ti:y?-i*
 A3(POSS)=ass-AUG C3(ERG)=CAUS-twist-PUNCTUAL-COMD
 ‘The hunter was twisting and twisting his big butt (in order to get the attention of the male deer).’ {olu27/84}

In (73), from a conversation, the speaker is reporting an unusual event in which the root of an almond tree is cracking the water tank.

- (73) *?i=yak-pu?-pe ya?aj chitzküik ya?aj tanke*
 A3(ERG)=CAUS-split-INCT.I this root this water_tank
 ‘This root is cracking the water tank.’ {AA/8/2000}

In (74), the verb *tze?px* ‘crack the wood into pieces’ takes the causative prefix, *yak-*, because it reports an event that is performed by a small child and not by the expected adult causer. When the referent of the causer is an adult, the prefix *yak-* does not occur.

- (74) *?i=yak-tze?px-u=k* *chu:chu-nak ya?aj kuy*
 A3(ERG)=CAUS-crack-COMI=ANIM small-DIM this tree
 ‘The small child cut the tree into little pieces.’

The non-agentive ambitransitive verbs of the following examples take the causative *yak-* because the events reported take place under unusual conditions. In (75a), a woman breaks a cup out of anger. In (75b), the person cuts the oranges even though the tree branches have many thorns. In (75c), a husband unexpectedly locks up his house after realizing that his wife is visited by her lover at night.

- (75) a. *?i=yak-je?k-wakx-u=k* *yu?k-?unak sa:ra porke*
 A3(ERG)=CAUS-snap-apart-COMI=ANIM pot-DIM Sara because
jayta?na=k ?i=?oy-i
 angry=ANIM A3(ABS)=be-COMD
 ‘Sara broke the little cup because she was angry.’
- b. *?i=yak-woj-tuk-u=k* *pi:sku ni porke*
 A3(ERG)=CAUS-break-DIR:ACROSS-COMI=ANIM orange ni because
?i=?oy-i-y ?apit
 A3(ABS)=exist-COMD-INVD thorn
 ‘He cut the oranges even though it (the tree) had thorns.’
- c. *?i=yak-?aw+kaj-u=k* *tuk+?aw+ku lyon*
 A3(ERG)=CAUS-bar_up-COMI=ANIM door Leonardo
porke ?i=ka?=?tük+?i:y?-a?n=ak ?i=ma?tzu fe:la
 because A3(ABS)=NEG=enter-IRRD=ANIM A3(POSS)=lover Felicia
 ‘Leonardo locked up the door so that Felicia’s lover couldn’t come in.’

Thus, in these examples the causative marker is affixed to an otherwise unmarked causative verb to describe situations that are unexpected or unusual, or situations that are done with a lot of effort due to the adverse general conditions in which the event takes place. The adverse conditions may be due to the inherent properties of the patient that makes difficult for the event to happen. The marker also appears when the portrayed event includes an unexpected and non-canonical causer. Dixon (2000:72) has reported similar conditions for the use of a causative marker with nonagentive ambitransitive verbs in Fijian.

3.2 The causative *yak-* and noun incorporation

3.2.1 Incorporation of patient in agentive verbs

The causative *yak-* takes as inputs only intransitive verbs. These can be agentive or non-agentive. The subject of intransitive verbs becomes the object of the derived verb. When the causative is affixed to agentive ambitransitive verbs, the patient may not be expressed in the clause as a core argument. For instance, the patient of the agentive ambitransitive verb *ʔu:k* ‘drink’ is omitted in the causative clause in (76b).

- (76) a. *tan=ʔu:k-u-ʔa?-a:t* *tzoy*
 A1(ERG)=drink-COMI-PERF-PL.SAP medicine
 ‘We have drunk the medicine.’ {lonja/103}
- b. *mü:t=ak tax=yak-ʔu:k-aʔn+e:-t*
 and=ANIM C1(ERG)=CAUS-drink-IRRD-PL.SAP
 ‘And we are going to make him drink.’ {diab1/33}

The only way to maintain the patient as an overt participant within the clause is by incorporating it into the derived verb. That is, the incorporating structures function as inputs to *yak*-causativization. In incorporating structures the patient appears between the causative marker and the verb root.

(77) Causative-Noun-Verb

- a. *ta=yak-nü:-ʔu:k-i* *pa:kax*
 C3(ERG)=CAUS-water-drink-INCD COW
 ‘He is giving water to the cows to drink.’ {mi1/308}
- b. *mü:t=ak ʔi=posi:yo-pi=xü=k*
 and=ANIM A3(POSS)=mug-LOC=EV=ANIM
ta=yak-kafet-ʔu:k-i
 C3(ERG)=CAUS-coffee-drink-INCD
 ‘And she makes it (the bird) drink coffee out of her mug.’ {rsch2/87}

Examples such as (77a, b) are syntactically monotransitive. The only two core arguments are the causer (the person who instigates the action) and the causee (the person who drinks the liquid). The patient does not retain any of the syntactic properties assigned to core arguments. It cannot be modified, it cannot cross-reference an absolutive proclitic or a 3rd person plural marker on the verb, and it cannot be relativized. In addition, the incorporated patient is always non-referential and low in topicality. Additional evidence that the incorporated patient is a syntactically inert argument comes from incorporating constructions in which the agentive ambitransitive verb root is not derived by the causative marker. In these constructions the verb is intransitive, as shown by the fact that its subject is marked by the absolutive proclitic instead of the ergative, (78).

- (78) *min=kafet-ʔu:k-aʔn* *tzu:-pi*
 A2(ABS)=coffee-drink-IRR.D night-LOC
 ‘You are going to drink coffee at night.’ {C11b/11/20}

Thus, causative constructions with agentive ambitransitive verbs such as (77a, b) have their causer functioning as subject, their causee functioning as direct object and the patient of the base verb as an inert argument.

3.2.2 *Incorporation of the causee with nonagentive intransitives*

There is another type of causative construction that involves nonagentive intransitive verbs in which the participant that gets incorporated is the causee (patient). For instance, a causative verb such as *yak-kaʔ* [CAUS-descend] ‘move something down’ may appear in clauses with three participants: a causer (agent), a causee (patient) and a location. In this type of clause the causer and the causee function as core arguments whereas the location stands as an oblique argument (marked by a postposition). In (79) the causer is expressed by the 2nd person ergative proclitic on the verb, the causee is expressed by the unmarked noun *tzümi* ‘load’, and the location is expressed by the noun *kamyon* ‘truck’ suffixed by the postposition *-jeʔ+mü* ‘from, on.’

- | | | |
|--|---------------|----------------------|
| (79) Causer (SUBJ) | Causee (DO) | Location (OBL) |
| <i>min=yak-kaʔ-am-e:t</i> | <i>tzüm+i</i> | <i>kamyon-jeʔ+mü</i> |
| A2(ERG)=CAUS-descend-IRRI-PL.SAP | load | truck-LOC |
| ‘You (pl.) are going to bring the load down from the truck.’ {olu28/508} | | |

The verb *yak-kaʔ* may incorporate its patient, i.e., the causee, when this participant is outranked in topicality by the semantic location, (80). The resulting verb stays transitive since the location argument occupies the direct object slot vacated by the causee. Thus, the subject of the clause is the causer, whereas the direct object is the location. The incorporated causee is syntactically inert.⁶

- | | | |
|--|----------------|---------------|
| (80) Causer (SUBJ) | Causee (Inert) | Location (DO) |
| <i>min=yak-tzüm+i-kaʔ-am-e:t</i> | | <i>kamyon</i> |
| A2(ERG)=CAUS-load-descend-IRRI-PL.SAP | | truck |
| ‘You (pl.) are going to unload the truck.’ | | {olu28/509} |

In Mithun’s typology of Noun Incorporation, constructions such as the one shown in (80) belong to Type II NI (manipulation of case):

Type II NI advances an oblique argument into the case position vacated by the IN [Incorporated Noun]. When a transitive V incorporates its direct object, then an instrument, location, or possessor may assume the vacated object role. (Mithun 1984: 856)

Type II NI verbs are transitive since the syntactic slot emptied by the incorporated patient is occupied by the otherwise oblique argument expressing the role of a location.

The direct object status of the location is confirmed by two facts. First, the nominal representing the location is no longer marked by a postposition. Contrast the noun *kamyon* ‘truck’ marked by the postposition *-je[?]+mü* in (79) with the same noun without the postposition in the clause with the patient incorporated, (80). Second, the location cross-references the absolutive proclitic in the inverse pattern, as shown in (81).

- (81) *ta=yak-xi:na-pet-ü-pa* *ja[?]*
 B1(ABS)=CAUS-chair-ascend-INV-INCL.I 3ANIM
 ‘(When I was young immediately I was climbed on [...]) they used to saddle me.’ {C11a/59/765}

Other examples where the causee (patient) is the target of incorporation and the location is the direct object are given in (82a–e).

- (82) a. *je[?] ?u:ra=xü=k ta=yak-tzüm+i-pet-i*
 that hour=EV=ANIM C3(ERG)=CAUS-load-ascend-COMD
?i=kawa:yu
 A3(POSS)=horse
 ‘That’s when he loaded his horse.’ {olu4/121}
- b. *je[?] ?u:ra ta=yak-xi:na-ka[?]-i ni+metzko*
 that hour C3(ERG)=CAUS-chair-descend-COMD two
?i=kawa:yu
 A3(POSS)=horse
 ‘That’s when he unsaddled his two horses.’ {C22/92/240}
- c. *tan=yak-pitu-ke:k[?]-u=k xi:mu*
 A1(ERG)=CAUS-stain-get_rid_of-COMI=ANIM Simon
 ‘I removed the stains from Simon.’
- d. *yak-ke:y+e-jo:y-a ni+ja[?]mej*
 CAUS-sin-be_lost-IMPR all
 ‘Remove all the sins from him.’ {rs1/27}
- e. *tan=yak-jün-tzi:y[?]-pe ya[?]-nak*
 A1(ERG)=CAUS-fire-be_attached-INCL.T this-DIM
 ‘I am lighting this little one.’ (Lit. ‘I am making the fire stick on this little one.’) {rspf1/476}

In sum, derived causative verbs may incorporate two types of syntactic arguments depending on the semantic class to which the base verb belongs. When the base

verb is agentive, such as ‘drink’, the incorporated noun in the derived causative is always the direct object of the base verb. In contrast, when the base verb is nonagentive, such as ‘descend’, ‘ascend’, ‘be lost’ and ‘be attached’, the incorporated noun in the derived causative is always the subject of the base verb. This last set of causative verbs represents the only case in Olutec where the causee is not encoded as a clausal Primary Object but as a syntactically inert argument. The syntactic role of the causee within this type of derived causative verb is purely determined by the degree of topicality of the two non-subject arguments involved. When the causee outranks the location as far as topicality is concerned, the causee is expressed as direct object and the location is overtly marked as oblique. When the topicality conditions are reversed, the causee incorporates and the location occupies the direct object position.

3.3 The grammaticalization of *yak* as a causative

Olutec has complex verb stems formed by the combination of more than one verbal root without any morphological sign of embedding or subordination. These combinations constitute a formal unit, i.e., they are part of the same phonological and morphological word. Semantically, serial verb constructions conceptualize a single event, that is, they name conventionalized activities which involve a sequence of two or more subevents. Olutec allows serial verb constructions containing as many as five verbs.

- (83) a. **Two verbs:**
kay-jo:y ‘finish eating’
 eat-lack
- b. **Three verbs:**
yak-chi:w-jot ‘take off the leaves of a corncob’
 let-grab-make_hole
- c. **Four verbs:**
yak-[?]ix-nax-küx ‘teach to read’
 let-see-cross-finish
- d. **Five verbs:**
yak-wo:k-kot-pet-küx ‘they were gathered’
 let-scratch-be_together-ascend-finish

Complex verbs of this type are common in West Africa, Southeast Asia, Melanesia, Papua New Guinea and pidgins and creoles (cf. Durie 1997; Foley and Olson 1986; Givón 1991 inter alia). Mesoamerican languages are not generally classified typologically as “verb serializing” languages. However, Olutec exhibits one type of serial verb construction known in the literature as “nuclear serialization” (Foley and Van

Valin 1984; and Foley and Olson 1986). The term “verb compound” is used to describe a similar construction in Mandarin Chinese (Li and Thompson 1981) and some South Asian languages. The verbs within this type of serialization share the operators marking aspect, modality and polarity, and at least one core argument. I will argue that this construction was the source from which the causative prefix *yak-* evolved.

The verbs in serial verb constructions must share at least one argument. Foley and Van Valin (1984) and Foley and Olson (1986) have recognized two different types of serial verb constructions on the basis of the relation that holds between the arguments of each verb. In the first type there is an identity between the two subjects of the serialized verbs. Same subject serialization with two intransitive verbs is illustrated in (84).

(84) S-S are Coreferential

$\emptyset = ma:j^? - jü:kx - kük - pa \quad ja^?$
 B3(ABS)=sleep-snore-PL3-INCL.I 3ANIM
 ‘They are sleeping and snoring.’ {aand/174}

Same subject verb serialization is also attested in cases in which one of the serialized verbs is transitive. The examples in (85) illustrate same subject serial verb constructions in which the first verb is transitive and the second verb is intransitive.

(85) A-S Coreferential

$tan = kay - ma:j^? - am = ak \quad piyu$
 A1(ERG)=eat-sleep-IRRI=ANIM chicken
 ‘I am going to have chicken for supper (eat-sleep).’

In the following example the two serialized verbs are transitive and share the same subject.

(86) A-A are Coreferential

$ti: \quad ?u:ra = k \quad tax = wop - pük - a^?n$
 what HOUR=ANIM C1(ERG)=hit-grab-IRRD
 ‘At what time am I going to round (hit-grab) them (sheep) up.’ {C9/64/577}

The second type of serial verb construction is attested when the object (O) of a transitive verb is coreferential with the subject of an intransitive or transitive verb. Crowley (1987:39) refers to this type of serialization as “switch-subject serial verbs”. For instance, in (87) the O of the transitive verb *ju:t* ‘unsheathe’ is coreferential with the S of the verb *pitzüm* ‘exit’.

(87) O-S are Coreferential

je? *?u:ra=xü=k* *ta=jut-pitzüm-i* *?i=kuchi:nu*
 that hour=EV=ANIM C3(ERG)=unsheathe-exit-COMD A3(POSS)=knife
 ‘At that time he unsheathed (unsheathe-exit) his knife.’ {diab2/106}

Switch-subject serial verb constructions are also known as “serial causative verbs” or “cause effect serialization” (Durie 1988:331) due to examples such as (88a, b). In these cases the first verb of the complex predication conveys a causative event whereas the second verb encodes the end-result or effect of the previous event. In (88a, b) the O of the transitive verb (the first verb of the serialized complex) is coreferential with the S of the second verb.

(88) O-S are Coreferential

- a. *jamaj=k* *kumpa:ne* *?i=yak-?o:k-u=xü* *ja?* *tzanay*
 that=ANIM friend A3(ERG)=let-die-COMI=EV 3ANIM snake
 ‘That friend killed the snake.’ {olu2/8}
- b. *min=wotz-ke:k²-nü-w-a?* *te?* *ya²aj*
 A2(ERG)=pull-move-already-COMI-PERF truly this
 ‘You have pulled it (the wire) out already.’ {aand2/117}

Several studies in serial verb languages have shown that constructions with juxtaposed verbs tend to be reanalyzed so that the high-frequency verbal roots become grammatical morphemes (Durie 1998; Givón 1975; Givón 1991; Foley and Olson 1985 *inter alia*). The most common processes of grammaticalization within serial verb constructions are cases in which a verb becomes an adposition, a valency operator (i.e., causative, applicative, passive), a verbal classifier or a grammatical marker of tense, aspect, mood, or direction.

The agentive ambitransitive verbal root *yak*, which means ‘let, distribute, offer, give away’, is one of the high frequency serialized verbs. The following pair of sentences illustrates the use of *yak*- as a main verb in both intransitive and transitive agentive clauses.

- (89) a. *mi=yak-am*
 B2(ABS)=offer-IRRI
 ‘Are you going to give?’ {aand/208}
- b. *jamaj=k* *tük-ko:+te:ku* *?i=yak-pe=k* *?an+pa+nü:*
 that=ANIM house-owner A3(ERG)=offer-INCL.T=ANIM liquor
 ‘The owner of the house is offering hard liquor.’ {olu3/93}

This verb is the source for the causative and passive markers. Both comparative data (cf. Kaufman 1963; and Wichmann 1995) and cross-linguistic tendencies (Hashimoto 1988; Haspelmath 1990; Givón and Yang 1994) suggest that *yak*

grammaticalized first as a causative marker and later on as a passive marker. Languages of both branches of the Mixe-Zoquean family include some development of the morpheme **yak* as a causative marker. For this reason Kaufman (1963) and Wichmann (1995) have reconstructed **yak-* as a causative prefix for Proto-Mixe-Zoque.

Morphological causatives are reanalyzed nuclear serial verb constructions. The construction *yak*+V developed in the context of “cause-effect” serialization, (88a). The O of the causative verb *yak* is coreferential with the S of the second verb. The two sequential verbs are ordered according to the direction of causation, i.e., the sequence follows iconic principles since the causative event occurs first and the end-result of the action follows.⁷

3.4 The reanalysis of *yak* as a passive and its constraints

The morpheme *yak* has developed a passive function in Olutec and other members of the Mixean branch of the Mixe-Zoquean family.⁸ Thus, a transitive verb prefixed by the passive *yak-* results in an intransitive verb whose only core argument, the semantic patient, is marked by the absolutive proclitic on the verb.

The two examples in (90) illustrate the active vs. passive alternation with the verb *kay* ‘eat’. The clause in (90a) is transitive-active. The agent cross-references the ergative proclitic and the patient does not bear an adposition. The verb is suffixed by *-pe*, incomplete for transitives. (90b) is a passive construction. Olutec passives are agentless, i.e., the agent cannot be overtly expressed within the clause. The patient of passives cross-references the absolutive proclitic on the verb. The presence of the incomplete suffix *-pa*, instead of *-pe*, is additional evidence that the prefix *yak-* detransitivizes former transitive verbs.

- (90) a. *je[?]=k ?i=mü:+te:ku ?i=kay-pe xük*
 that=ANIM A3(POSS)=owner A3(ERG)=eat-INCL.T beans
 ‘Its master is eating beans.’ {aand/61}
- b. **Passive**
*?i=ka:=win+ ?i:y[?]-pe=k ta ø=*yak-kay-pa**
 A3(ERG)=NEG=KNOW-INCL.T=ANIM COND B3(ABS)=PASS-eat-INCL.I
 ‘He doesn’t know if that is edible.’ {olu2/11}

The use of *yak* as a verb root meaning ‘offer’ and as a passive marker within the same verb stem is illustrated in (91).

- (91) *pero jumü ?i=yak-yak-a?n na:x*
 but where A3(ABS)=PASS-offer-IRR.D land
 ‘But where is land going to be given away?’ {C24/34/266}

Derived causative verbs, i.e. verbs that take the causative *yak-* (i.e., classes 1 to 4 and 6), cannot be passivized, as shown by the ill-formed construction in (92b).

- (92) a. **Active**
tax=yak-ʔo:k-i *ʔoya+mej jeʔ po:*
 c1(ERG)=CAUS-die-COMD for_good that opossum
 ‘I killed the opossum for good.’ {rs6/19}
- b. **Ill-formed Passive with Derived Causatives**
 **ʔi=yak-yak-ʔo:k-i* *ʔoya+mej jeʔ po:*
 A3(ABS)=PASS-CAUS-die-COMD for_good that opossum
 (Intended reading: ‘The opossum was killed for good.’)

The fact that *yak-yak* is a possible sequence, as in (91), makes it clear that the constraint is not due to phonotactic factors. There is no reason to believe that this constraint is due to morphological factors such as the fact that morphologically derived verbs are not allowed to be passivized since verbs with applicatives can passivize. In (93), the verb *nükx* ‘go’ is derived by the associative applicative *mü:-* and the whole base, *mü:nükx* ‘take’, is passivized by *yak-*.

- (93) *ta* *ø=yak-mü:-nükx-nü-w-aʔ* *jaʔ*
 COND B3(ABS)=PASS-ASSOC-go-already-COMI-PERF 3ANIM
 ‘[Who knows] if he has already been taken along.’ {aandb/239}

This restriction must, then, be triggered purely by semantic factors, i.e., by the fact that once a verb is explicitly marked as having a causer, this participant has to be conveyed as part of the argument structure of the verb in all conditions. Thus, derived causatives may not co-occur with a passive marker because the Olutec passive construction is agentless, i.e., it does not allow the agent to be expressed in the clause. Instead, derived causative verbs occur in a generic (unspecified) agent construction that functionally acts as a passive. The verb in this construction is prefixed by *ja:-*. As with passives, the agent in this construction is never expressed by an overt nominal phrase. Unlike passives, the verb in the generic agent construction stays transitive as can be corroborated by the following two facts: first, the verb may take a plural suffix cross-referencing a plural agent; and second, the verb always follows the inverse pattern showing that the patient outranks the generic agent in topicality. In (94c) the 3rd person plural suffix *-küx* cross-references the unspecified agent.

- (94) a. *jeʔmü=ak* *ʔi=ja:-yak-ʔo:k-i-y*
 there=ANIM A3(ABS)=GEN_A-CAUS-die-INCD-INVD.C
ʔi=müʔku
 A3(POSS)=brother
 ‘(Somebody) killed his brother there.’ {aand/690}

- b. $\emptyset = ja:-yak-pet-ü-w=xü=k$
 B3(ABS)=GEN_A-CAUS-ascend-INV-COMI=EV=ANIM
kawa:yu-je²+mü
 horse-LOC
 ‘(Somebody) put her on the horse.’ {aandc/27}
- c. $\emptyset = ja:-yak-ʔo:k-küx-ü-w=ak$ *tan=xu²ni*
 B3(ABS)=GEN_A-CAUS-die-PL3-INV-COMI=ANIM A1(POSS)=dog
 ‘(They/some people) killed my dog.’

4. The causative

Olutec has a second causative marker, the prefix *ta:k-*. This prefix resulted from the fusion of the instrumental applicative *toj-* < Proto-Mixe-Zoque **to* occurring before the causative *yak-*, i.e., *toj+yak* > *ta:k*. The causative marker *ta:k-* derives ditransitive verbs from agentive ambitransitive verbs. That is, verb stems with the form *ta:k-V* require three core arguments: the causer, the causee (agent of the base verb), and the patient of the base verb. There are two problems that are going to be addressed here. First, the syntactic status of the two objects, and second, the semantic motivation for using the combination of an instrumental applicative and a causative morpheme to create a new causative marker. I will first establish the function of the instrumental *toj-* when it appears by itself and then I will proceed with the discussion of the complex causative *ta:k-*.

4.1 On the function of the instrumental applicative

The applicative *toj-* brings into core argument position instrumental participants that are not licensed by the semantics of the verb. Verbs that take the instrumental applicative change their valency. *Toj-* derives transitive verbs from intransitive verbs, and ditransitive verbs from monotransitive verbs. Instruments are coded as obliques by the preposition *mü:t* in clauses without the applicative. When the verb is derived by *toj-* the instrument is treated as syntactic object (Primary or Secondary) and is no longer marked by an adposition.

- (95) a. **Intransitive. Instrumental = Oblique**
ta=yox+e+tun-u mü:t je² wata:ka
 B1(ABS)=work-COMI with that hoe
 ‘I worked with that hoe.’

- b. **Derived Transitive. Instrumental = Primary Object**
tan=toj-yox+e+tun-u=?ampok je? wata:ka
 A1(ERG)=INST-work-COMI=also that hoe
 ‘I also worked with that hoe.’ {rspf2/30}
- (96) a. **Transitive. Instrumental = Oblique**
je?²+pi=ak ?i=ni-xotz-e-j mü:t tüpx+i
 there=ANIM A3(ABS)=REFLX-tie-INCD-INVD.I with rope
 ‘He tied himself there with a rope.’ {olu1/168}
- b. **Derived Ditransitive. Instrumental = Secondary Object**
ta=yak-yü?²k-i tüpx+i para
 c3(ERG)=CAUS-be_ready-COMD rope for
ta=toj-xotz-a?²n=ak küp+i
 c3(ERG)=INST-tie-IRRD=ANIM firewood
 ‘He got the rope ready to tie the firewood with it.’ {olu1/77}

The applicative *toj-* also occurs with verb bases that resulted from verb roots derived by the causative *yak-*. In these contexts each derivative prefix maintains its phonetic form, (i.e., they do not fuse into a complex affix), and each affix has an independent function, i.e., one is an instrumental applicative and the other a causative marker.

- (97) a. *je?²=k ?i=tu?²tz+ta ?i=toj-yak-?²aw+wa:tz?²-u*
 that=ANIM A3(POSS)=tail A3(ERG)=INST-CAUS-open-COMI
tük+?²aw+ku
 door
 ‘He (a mouse in a cartoon) opened the door with his tail.’ {rspf1/65}
- b. *?i=toj-yak-pakaw-u ?i=ko?²+pak*
 A3(ERG)=INST-CAUS-straight-COMI A3(POSS)=head
 ‘He straightened it up with his head.’ {rspf1/106}

The instrument is the Primary Object of derived transitives, i.e., it can be passivized, and is marked by the absolutive proclitic on the verb in reflexive and inverse constructions. In contrast, the instrument is the Secondary Object of derived ditransitives, i.e., it is an argument that bears only a few of the properties assigned to objects. Secondary objects can be relativized with the same strategy used by the only object of a transitive verb. In addition, when the Secondary Object is plural, it may be cross-referenced on the verb by a plural suffix. However, Secondary Objects may not be passivized and are not signaled by the absolutive proclitic on the verb. The patient of the derived ditransitive verb exhibits the three properties that define a Primary Object in Olutec: 1) The patient is the subject of passive, (98a); 2) the patient binds with the agent in reflexives and reciprocal constructions, (98b);

and 3) the patient is cross-referenced on the verb by the absolutive in the inverse pattern, (98c).

- (98) a. **Patient = Subject of Passive**
tüpxi ta=yak-toj-tzum-pa
 rope B1(ABS)=PASS-INST-tie-INCL.I
 ‘I am being tied with rope.’
- b. **Patient binds with Agent in Reflexives/Reciprocals**
ta=ni-toj-puj-ü-w xapun
B1(ABS)=RFLX-INST-wash-INV-COMI soap
 ‘I wash myself with soap.’
- c. **Patient = Absolutive in the Inverse**
tüpx+i=je? ta=toj-tzum-ü-w=ak xuxta:tu
 rope=CLEFT B1(ABS)=INST-tie-INV-COMI=ANIM soldier
 ‘It is with rope that the soldier tied me up.’

4.2 Another double object construction. The benefactive construction

Olutec has another applicative marker, *-ja:y?* (*-ay*, *-a?x*, *-a?*, *-ja?*), that creates an argument slot for the beneficiary, malefactive, addressee and some prominent locatives. Transitive verbs suffixed by *-ja:y?* result in ditransitive verbs.

- (99) a. **Transitive**
?i=pük-?awok ta=ko?+tzow-i je?=k
 A3(POSS)=feather-DIM C3(ERG)=request-INCD that=ANIM
pu?juyu
 roadrunner
 ‘The roadrunner asks for feathers.’ {zopil/57}
- b. **Ditransitive**
nüikx-pa=k tax=ko?+tzow-a?-i yox+e je?=k
 go-INCL.I=ANIM C1(ERG)=request-BEN-INCD work that=ANIM
jula:nu
 person
 ‘I am going to ask that person for a job.’ {olu1/230}

Unlike the ditransitive instrumental construction, in the ditransitive construction with *-ja:y?*, the added argument is always the Primary Object of the clause. There are three morphosyntactic properties that are unique to the added argument. First, the added argument functions as the subject in passives. This is illustrated in (100) where the absolutive marker *mi=* refers to the recipient.

- (100) *jeʔ kafet mi=yak-tzo:kʔ-aʔx-anüpa*
 that coffee B2(ABS)=PASS-pay-BEN-IRR.INV
 ‘You are going to be paid for that coffee.’ {Trab/665}

Second, the agent binds with the added argument in reflexives and reciprocals, (101).

- (101) *jeʔ+tük=ak ø=ni-pa:t-küx-aʔx-ü-w=ak me:nyu*
 they=ANIM B3(ABS)=RECIP-find-3PL-BEN-INV-COM=ANIM money
mü:t=ak ?i=jayko-tük
 and=ANIM A3(POSS)=sister-PL
 ‘They_i and their_i sisters found money for each other.’ {A/RE}

And third, the added argument is overtly marked by the absolute proclitic on the verb in the inverse.

- (102) *pün mi=juy-aʔx-an+ü+pa tü:nʔ+i*
 who B2(ABS)=buy-BEN-IRR.INV shit
 ‘Who is going to buy shit from you?’ {vend/160}

The patient of these double object constructions is a Secondary Object since it maintains some of the properties that are unique to core arguments. It cross-references the plural marker on the verb, and it can be relativized using the same strategy as the direct object of monotransitive clauses.

The contrast between the instrumental and the benefactive double object constructions makes it evident that the two main factors that determine what is coded as Primary vs. Secondary Object in Olutec are topicality and animacy. In instrumental double object constructions the patient maintains the PO status because the argument whose referent is most likely to be animate is the patient and not the instrument. In the case of benefactive double object constructions, the added argument is coded as the PO instead of the patient, since in most of the cases the added argument is the most topical and animate participant among the two objects of the clause (cf. Morolong and Hyman 1977; Givón 1984; Dryer 1986). As we will see below, the same principle is what gives the causee the PO status in causative double object constructions.

4.3 Ditransitive constructions with *ta:k-*

The difference between *yak-V* and *ta:k-V* can be clearly seen when comparing the same verb root under the two types of causative formations. For instance, the verbal root *?u:k* ‘drink’ co-occurring with the causative *yak-* forms monotransitive verb stems, as in (76b). The only two core arguments of a clause with the verb *yak?u:k* ‘make somebody drink’ are the causer and causee (agent of the causativized verb).

The patient of the causativized verb is unspecified or appears incorporated, (77a, b). In contrast, ?u:k and many other agentive ambitransitive verbs co-occurring with the causative ta:k- , form ditransitive verb stems, as in (103a–c). The argument structure of a verb derived by ta:k- includes a causer, a causee, and a patient of the base verb.

- (103) a. min=ta:k-?u:k-am $\text{ja}^?$ $\text{min=pakik+pa+? n\ddot{u}:}$
 A2(ERG)=CAUS-drink-IRRI 3ANIM A2(POSS)=cold water
 ‘You are going to make him drink your cold water.’ {rss10/23}
- b. tax=ta:k-?e:p-am $\text{jum\ddot{u}}$ $\text{min=ma:j}^?-a^?n$
 C1(LOCAL)=CAUS-see -IRRI where A2(ABS)=sleep-IRRD
 ‘I will show you where are you going to sleep.’ {olu28/124}
- c. ?i=majaw ta=ta:k-juy-i tzoy
 A3(POSS)=woman C3(ERG)=CAUS-buy-INCD medicine
 ‘He sent his wife to buy a remedy.’ {comel/121}

The causee (agent of the base verb) is the primary object of the clause, i.e., it is the participant cross-referencing the absolutive on the verb in the inverse construction, as in (104a, b).

- (104) a. $\text{ya}^?aj=ak$ $\text{tan=m\ddot{u}:+ta}^?aw$ $\text{ta=ta:k-kay-\ddot{u}-w}$
 this=ANIM A1(POSS)=neighbor B1(ABS)=CAUS-eat-INV-COMI
 tzanay
 snake
 ‘My neighbor gave me snake to eat.’ {rs4/226}
- b. $\text{m\ddot{u}:t=ak}$ $\text{tan=tz\ddot{u}}^?$
 and=ANIM A1(POSS)=mother
 $\text{tan=ta:k-p\ddot{u}}^?kx-i-y$ $\text{ja}^?$ $\text{pa}^?ak-n\ddot{u}:n$
A1(ABS)=CAUS-make_tortilla-COMD-INV.D.C 3ANIM sweet-tortilla
 ‘And my mother made me make sweet tortillas.’ {C9/61/554}

The causee is also the argument cross-referencing the absolutive in the generic (unspecified) agent construction that is functionally a passive. (See the discussion of examples (94a–c) above.)

- (105) a. $\text{ta=ja:-ta:k-motow-\ddot{u}-w}$
B1(ABS)=GEN_A-CAUS-listen-INV-COMI
 ‘Somebody made me listen to it.’
- b. $\text{mi=ja:-ta:k-kay-\ddot{u}-w=ak}$ tzanay
B2(ABS)=GEN_A-CAUS-eat-INV-COMI snake
 ‘Somebody made you eat snake.’

The causative *ta:k-* may derive transitive verbs which are themselves the result of causative derivation. For instance, the transitive verb *yak-ʔo:k* ‘to kill’ is the morphological causative of the verb *ʔo:k* ‘die’. The complex stem *ta:k-yak-ʔo:k* ‘make somebody kill someone else’ includes three core arguments: the causer, the causee (agent and causer of the derived verb), and the patient (causee of the base verb), as in (106).

- (106) *tan=ta:k-yak-ʔo:k-u=k* *sa:ra ʔi:tzümü*
 A1(ERG)=CAUS-CAUS-die-COMI=ANIM Sara pig
 ‘I made Sara kill the pig.’

The rationale that explains why the causative *ta:k-* grammaticalized from the instrumental applicative *toj-* and the causative *yak-* is as follows. On the one hand, we have seen that the function of the causative *yak-* is to introduce an external causer. The causative derivation only occurs with intransitive verbs (of both types, agentives and nonagentives). The function of the instrumental applicative fused with *yak-* is to introduce a participant that is naturally selected by the semantics of the verb but that had to be left out due to the structural restrictions of the causative derivation. Out of the many applicatives that the language has, the instrumental allows that a prominent participant enter into the argument structure of the clause as a secondary object when the primary object slot is already occupied. It is, then, very likely that *toj-* originally encoded the notion of instrument and that later on it grammaticalized as a general applicative for coding topical patients of agentive ambitransitive verbs. In a similar way, English may use the preposition ‘with’ to specify the patient of verbs such as *finish* (e.g. ‘I finished with it.’) The fact that the instrumental fused with the causative *yak-* can be easily motivated. The form *ta:k-* is just an additional example of the many that have been reported in the literature of grammaticalization where two or more morphemes that occur frequently together become one inseparable unit in the course of time.

5. Conclusions

This paper investigated the morphosyntax and diachronic development of two Olutec causative markers *yak-* and *ta:k-*. In order to explain the semantic contribution of the two causative morphemes, it was necessary to investigate the six formal verb classes found in the language as well as the morphosyntax and semantics of various applicative markers that increase the verb valence. The verb classes were established on the basis of the stative, inchoative and causative alternations. The formal classes that resulted are associated to coherent semantic verb classes. We found that positionals (e.g. *sit*), derived nouns (e.g. *man*) and adjectives (e.g. *big*)

and nonagentive intransitive verbs (e.g. die) have similar causative formation. All of these verbs share the property of being nonagentive in their inchoative alternation. Positionals, derived nouns and adjective as well as nonagentive intransitive verbs require an explicit marker to introduce a causer. Nonagentive ambitransitive verbs (e.g. break) appear unmarked in the causative alternation. The notion of cause is part of the lexical semantics of this type of verb. Finally, agentive ambitransitive verbs (e.g. eat) do require a causative marker that introduces an external causer to events that already include an agent.

Non-agentive ambitransitive verbs may take the causative marker to convey marked situations where a lot of effort on the part of the agent is required to change the state or condition of the patient (e.g. cause something to become broken.) The difficulties found in the situations conveyed by the marked causative construction may be motivated by the inherent qualities of the object involved in the event or by the general circumstances in which the event takes place. It is very common to find this type of causative construction when the change of state is not actually realized or when the change of state takes place under conditions that are not totally within the control of the agent.

Agentive ambitransitive verbs cannot include their semantic patient as a syntactic argument when they are derived by the causative *yak-*. The patient either gets omitted or is incorporated into the verb stem. In both of these constructions the patient is very low in topicality.

There is a second morphological causative construction in which one of the participants shows up as an incorporated noun. All the verbs involved in this second construction are nonagentive intransitives. The nominal that incorporates is the semantic causee, which is also the semantic patient and original subject of the base verb. The causee incorporates when it is outranked in topicality by the semantic location.

The second causative marker, *ta:k-*, derives ditransitive verbs from agentive ambitransitive verbs. There are several reasons to suspect that this construction is only used when the speaker wants to foreground the topicality of the patient of the base verb. The *ta:k-* causative is a formally more marked construction with respect to the *yak-* causative construction. It was suggested that the *ta:k-* construction arose from the reanalysis of an instrumental applicative in combination with the unmarked causative construction.

The origin of the morphological causative was traced back to a nuclear serial verb construction well known in the literature on serial verb languages as the cause-effect serial verb type. The same construction was further reanalyzed as a passive construction in cases in which the verb involved was either agentive ambitransitive or nonagentive ambitransitive. Similar chains of grammaticalization have been reported in the grammaticalization literature (cf. Hashimoto 1988; Givón and Yang

1993). In the case of Olutec, more research is needed to account for the various steps that triggered the reanalysis of the causative morpheme into a passive marker.

Notes

1. The Olutec data come from fieldnotes and texts collected, transcribed and analyzed by the author. The data were gathered during several field seasons which began in the summer of 1994. The fourteen months of field research were made possible through financial support from the following agencies and institutions: Universidad de Guadalajara, Universidad Nacional Autónoma de México, CONACYT (1994–1995). Three fieldwork seasons were funded by the following grants received by Kaufman and Justeson: National Geographic Society (#5319-94), National Science Foundation (SBR-9411247 and SBR-9511713) and the Max Planck Institute for Psycholinguistics (1996–1998). I am grateful to Antonio Asistente, Rafaela Santander, Inez Díaz, Nicolasa de los Santos, Josefa de los Santos, Otilio de Dios, Alfredina Asistente, Ruperta Pérez, Tomás de los Santos, Bonifacio Canuto, Ilaria Cándido, Hermelindo Agapito, Alfonso Tomás, and the late Lorenzo Molina, Bartolo Flor, Jesús de los Santos, Victor González, Mario Melchor, Agripino Molina, Claudio Pavón, Ernesta Santander, Criserio Molina, Ilario González and Andrés Puchulín for their continuous cooperation, patience, and generosity. I also thank Thom Smith-Stark for his comments on an earlier version of this paper.
2. Morpheme concatenations in the examples are: + combination of un glossed morphemes that form a word; = clitic.
3. For some speakers the vowel of all 1st person markers: *tan=* (Set A), *ta=* (Set B), *tax=* (Set C), and *ta=* (Set C), is /ü/ instead of /a/. In Clark (1981) the paradigm of person markers that I list with /a/ are listed with /ü/. Among the speakers I have worked with, only two use the forms with the vowel /ü/ instead of /a/. There is comparative evidence which suggests that the forms with /ü/ are more conservative, i.e., similar to the person markers that have been reconstructed for Proto-Mixe-Zoque (cf. Kaufman 1963; Wichmann 1995:95–100; Kaufman and Justeson [In press].)
4. The selection among the two incompletive forms for dependent clauses is triggered by the vowel of the syllable which precedes the incompletive marker. The morpheme *-e* occurs after syllables with non-high vowels /a/, /e/, and /o/; in contrast, the morpheme *-i* occurs after syllables with high vowels /i/, /ü/ or /u/.
5. Remember that in the configurations (3:1), (3:2), and (3:3') the inverse suffix *-ü* precedes the aspect marker in independent clauses.
6. In agentive nominalizations, the location is not overtly expressed as direct object. Thus, it is possible to have *ta=yak-tzüm+i-ka[?]-pa+[?]* B1(ABS)=CAUS-load-descend-NOMI 'I am a loader'.
7. Note that causative verb constructions do not follow the expected order of morphemes which is attested in a typically OV language, i.e., the verb of effect followed by the verb of causation. There are several pieces of evidence that Olutec and the rest of Mixe-Zoquean languages were OV by the time the morphological causative verb construction arose. Thus,

the fact that the order of morphemes is: verb of causation followed by the verb of effect, is an indication that the morphological causative construction did not develop from a complex complement clause but from a serial verb construction. Various aspectual and modal markers are suffixes. They very likely developed from complement constructions which follow the expected order of morphemes found in a prototypical OV language.

8. Haspelmath (1990:46–49) reports various other languages where the causative morpheme is used as a passive marker. He claims that a causative marker can become a passive marker, but there is no known example in the literature of a passive becoming a causative. Haspelmath follows Keenan (1985) in trying to explain the reanalysis from a causative construction to a passive construction via a reflexive-causative. The following are examples that illustrate the proposed reanalysis according to Haspelmath (1990:46).

- (a) I have the barber shave me (causative)
- (b) I have myself shaved by the barber (reflexive-causative)
- (c) I am shaved by the barber (passive)

There is no evidence that such steps occurred in Olutec or other Mixean languages where the two uses of *yak* are present. Shibatani (in personal communication) has suggested to me that the Olutec passive may have arisen from a permissive (causative) expression of allowing something happen to the causer: “I let/allow him (to) shave me” giving a later reading as “I was shaved.” Further analysis is required to clarify the diachronic scenario of this development.

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On some causative doublets in Classical Nahuatl

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In this article, I will examine a phenomenon which at first sight looks like a mere detail of Nahuatl grammar: the fact that a few transitive verbs have two causative forms with different meanings. I will try to show that this fact, first noticed in the colonial period but almost unknown to posterity, is of great significance and brings an interesting light to the discussions about the meaning of causatives. In Section 1, I will relate the discovery of Nahuatl causatives in the 16th and 17th centuries. In Section 2, I will quote and comment some excerpts from the literary corpus of Classical Nahuatl, which stretches roughly from 1550 to 1650. In Section 3, I will bring in some more general and specific grammatical data to the understanding of these double causatives. In Section 4, I will give some formal hints for both a semantic and a syntactic interpretation of this phenomenon.

1. The discovery of Nahuatl causative structures

Classical Nahuatl (or Aztec) has the oldest grammatical tradition among American Indian languages. The first grammar (*Arte de la lengua mexicana*) was written by the Franciscan friar Olmos in 1547 (three decades before the first English grammar). Molina, better known as the author of the first dictionary (1571), also wrote an *Arte*, and so did the Jesuits Rincón (1595) and Carochi (1645), the latter being probably the greatest linguist of the colonial period.

These authors discovered the most striking morphosyntactic features of Nahuatl, one of them being its strictly caseless, head-marking structure where all the arguments (subject, first and second object, and noun possessor) are marked by personal prefixes. Moreover, they discovered and eventually came to a very accurate description of the processes and markers for reducing or increasing verb va-

lence. The terms *impersonal* and *passive* (*pasivo*) for valence reduction appear as early as in Olmos, but they admittedly existed in European tradition, since Latin and Greek do have such categories (even though they are not used in a strictly equivalent manner). Valence increase (causative and applicative forms) was a more unfamiliar feature which has no morphological equivalent in Latin or Greek. To my knowledge, the term *applicative* (*aplicativo*) was first coined by Rincón. For *causative*, this same author uses *compulsivo*, but Olmos had already recognized the category, even if he fails to give it a name:

Ay otros verbos actiuos¹ que se deriuán indiferentemente de verbos actiuos o neutros (...) Por la mayor parte acaban en **tia**, y estos significan hazer, persuadir, o constreñir a otro que haga lo que el verbo, de donde se deriuán, significa o importa. Ex. **nitlaqua**, yo como; **nitetlaqualhtia**, yo doi de comer, o hago comer a otro; **nicochi**, yo duermo; **nitecochitia**, yo adormezco a otro, o le hago dormir (...) o recibo a algunos para que duerman, scil. hospedar.

(There are other transitive verbs which may be derived from both transitive and intransitive verbs (...) Most of them end in **-tia**, and they mean making, persuading, or forcing someone to do what the verb from which they are derived means. Ex. **nitlaqua**, I eat, **nitetlaqualhtia**, I give something to eat, or I have someone else eat; **nicochi**, I sleep, **nitecochitia**, I put someone else to sleep, or make him sleep (...) or put people up for sleeping, say, accomodate.)

In these examples, **qua** (/k^wa/) and **cochi** (/koči/) are verb stems; **ni-** is 1st person, singular subject prefix; **-tla-** is an inanimate indefinite object prefix and **-te-** (/te-/) an animate indefinite object prefix. These are very prototypical causative constructions: the causative verb has one argument more than the verb from which it derives, and this “new” argument (causer) occupies the subject place. Moreover, they represent a typical grammatical, productive causative.² They are marked by an affix which can be interpreted (and translated into other languages) in several ways, which means that they have a general abstract value. But we also see two different causative markers, **-tia** (/tia/) and **-htia** (/htia/: **lh** stands for an unvoiced /l/). And this is the point at issue in this article.

Rincón, who gives an equivalent definition, uses for the first time the word *compulsivo*, and notes that the verb **itta** ‘see’ has more than one causative:

Verbo compulsiuo es el que compele y mueue a hazer la action del verbo donde descende. v.g. **nicchiua**.hago. **nicchiualtia**: mueuo a que otro haga algo, **nicochi**. **nic cochitia**. hagole dormir (...) **itta**, **ittaltia**. agole ver mouiendo el sujeto, **ittitia**, hagole ver, mostrandole el objeto, **itztiltia**, hagole mirar encarandole hazia alla.

(*Verbo compulsivo* (i.e. causative verb) is (the verb) which constrains and leads to perform the action of the verb from which it is derived, e.g. **nicchihua**

I make. **nicchihualtia**. I lead s.o. else to make sth, **nicochi**. **nic cochitia** I make him sleep (...) **itta**, **ittaltia** I cause him to see, by moving the subject, **ittitia**, I cause him to see, by showing him the object, **itziltia**, I cause him to look, by turning him towards there.)

We find the same data, with a more detailed comment, in Carochi (1645):

Verbo compulsio es, el que compele, y mueue à hazer la accion del verbo, de que se deriuu ... Del verbo **mati** saber, cuyo passiuo es **macho**, se forma el compulsiuo **machtia**, enseñar. Tiene tambien por compulsiuos **machtia**, y **machtia** ...

Estos hazen en diferentes maneras. **caqui caquitia** l. **caquiltia**, verbi gracia **onictecaquilti in tlein omitô**, he dicho y referido à otros lo que se ha dicho ... **Itta**, tiene tres compulsiuos: **ittaltia**; **niquittaltia in tonatiuh**, hagole ver el sol, mouiendole el sujeto para que le vea. **Ittitia**, hagole ver, mostrandole el objeto. **Itziltia**. Hagole ver, encarandole hazia alguna parte, para que vaya a ella, verbi gracia **In tlatatecolotl mictlampahuic quimitziltitihu in tlâtlaconimê**. El Demonio haze ir al infierno à los pecadores, los encara, o lleua encarados hazia allà ...

(*Verbo compulsivo* (i.e. causative verb) is (the verb) which constrains and leads to perform the action of the verb from which it is derived ... From the verb **mati** know, of which the passive is **macho**, we form the causative **machtia**, teach. It also has as causatives **machtia** and **machtia** ...

The following ones are formed in different ways. **caqui** (hear) **caquitia** or **caquiltia**, e.g. **onictecaquilti in tlein omitô** I told and reported to other people what was said ... **Itta** (see) has three causatives: **ittaltia**; **niquittaltia in tonatiuh**, I cause him to see the sun, by moving the subject so he can see it. **Ittitia**, I cause him to see, by showing him the object. **Itziltia**. I cause him to see, by turning him to some direction in order to go there, e.g. **In tlatatecolotl mictlampahuic quimitziltitihu in tlâtlaconimê**. The devil makes sinners go to hell, he turns them or takes them looking into that direction ...)

These data certainly deserve a very careful examination. We may rightfully ask ourselves whether they are reliable, how many verbs show such doublets with the same semantic difference, and why it is so. The answer to the first two questions can be found by checking the corpus, but answering the last one requires delving into a general semantic analysis of causatives and mapping this analysis onto Nahuatl morphosyntactic structure. Since the two causative suffixes **-itia** and **-tia** only differ in the occurrence vs. lack of an initial /l/, one crucial point will obviously be the morphological status and meaning of this /l/. The most plausible hypothesis is that it is a full morpheme: I will adopt this hypothesis as a starting point, and will therefore systematically break **-itia** into two morphemic segments **-l-tia** in the following examples.

2. Some corpus evidence for the causative doublets

First of all, let us get rid of *itztiltia*, which is mistakenly quoted by Rincón as a third causative of *itta*: actually, it does not come from *itta*, but from an old root /*(i)c-*/ which refers to a movement and synchronically only appears as a prefix or a suffix (see Launey 1986).

Now, if we look into Rincón's and Carochi's glosses of *itta-l-tia* vs. *itti-tia* (the latter being the result of an ablaut from **itta-tia*), we can sum up the difference by saying that *-l-tia* is used when the experiencer (the seeing entity) also has an agentive role (s/he does something in order to see something), while *-tia* is used when there is no action from the experiencer (something is simply disclosed or brought before his or her eyes). One problem is that apart from Carochi's example we hardly find any *itta-l-tia* in the corpus. However, all occurrences of *itti-tia* confirm or at least do not invalidate Carochi's gloss. For instance, the example (1a) is about fishermen who have caught a very strange and ominous bird and go to show it to the king, and (1b) is a metaphor taken from the discourse of the father to his son (the idea is: I teach you all the secrets of life):

- (1) a. (XII,3) *K-itti-ti[a]-to-'* in *Motekwsoma*
 (s3)O3-see-CAUS-EXTROV/DET/Moctezuma³
They went to show it to Moctezuma
- b. (VI,108) *Mochi ni-mitz-itti-tia*
 All/s1-O2(*O3)-see-CAUS
I show you everything

Moreover, we can find some more evidence if we examine reflexive causatives. This combination can occur in three different ways, which for brevity's sake can be represented as:

- (2) a. *a makes that a V b* (subject of causation coindexed with subject of the embedded verb)
- b. *a makes that b V a* (subject of causation coindexed with object of the embedded verb)
- c. *a makes that b V b* (internal coindexation within the embedded verb)

Some corpus examples of these types could be (3a–c), respectively:

- (3) a. (I,64) *O mo-tla-polo[a]-l-ti[a]'-k-e', o te-tla-polo[a]-l-ti[a]'-k-e'*
 PAST-(s3)-REFL-INDEF-lose-///-CAUS-PFT-PL/PAST-(s3)-INDEF-INDEF-lose-///-CAUS-PFT-PL
They have committed mistakes at their own and at other people's expense (“*They have made themselves lose things, they have made people lose things*”)

- b. (VI,163) **ki-mo-[i]tti-tia in inamik**
 (s3)-O3-REFL-see-CAUS/DET/her husband
(The devil) shows himself to her husband
- c. (1,45) **ki-ne-piya-l-ti[a]-s**
 (s3)-INDEF.REFL-keep-/l/-CAUS-FUT
He'll have him take care of himself

The indefinite reflexive prefix **-ne-** which appears in (3c) is used in the case of an internal reflexive (also see below Section 4). I have unfortunately been unable to find any example corresponding to (2c) with **itta** (e.g. *he made her see herself*), and forms like (2a–3a) are on the whole very uncommon for semantic reasons (they are intrinsically pleonastic). It is striking, however, that (3b) shows the **-tia** form, not the **-l-tia** one, because it fits our former idea: if I want someone to see me, I normally have to move or do something to myself rather than to the person who has to see me, so the experiencer is no agent.

As we can read in Carochi's quotation, the causative doublets are not restricted to 2.3. Beside **itta see**, some other verbs show the same doublets with the same semantic contrast. This may be the case with other verbs of perception, though the data are scarce.

- (4) a. C. 465 **O ni-k-te-kaki-l-ti[a]' in tlein o m-i'to'**
 PAST/s1-O3-INDEF-hear-l-CAUS+PFT/DET/what/PAST/(s3)-REFL-say+PFT
I reported what had been said
- b. (VIII,73) **Intlakamo melawak tla'tolli o ki-kaki-ti[a]'-k-e'**
Motekwsoma
 If not/true/speech/PAST/(s3)-O3-hear-CAUS-PFT-PL/Moctezuma
*If the report which they had made to Moctezuma was not true,
 (he jailed them and did away with them)*
- (5) a. (VI,26) **O ik ontla-polo' in maxkatsin ... in to-k-om-m-i'nekwi-l-ti[a]-li[a]'**
 PAST/thereby/he damaged/DET/your property/.../DET-PAST-2S-3O-EXTR-REFL-smell-l-CAUS-APPL+PFT
(The bad ruler) ruined everything with your property ... which thou hast let him smell
- b. (VI,52) **A'so san mits-on-i'nekwi-tia, a'so san motentlan k-on-kix-tia in iitsmolinka in iselika**
 Maybe/just/(s3)-O2(*O3)-EXTR-smell-CAUS/, maybe/just/under your lips/ (s3)-O3-EXTR-go out-CAUS/DET his freshness/DET/his tenderness
Perhaps he just causeth thee to smell, perhaps he just passeth before thy lips his freshness, his tenderness

Things are not totally clear, but it may be the case that in (4a) the author of the report did something before (like gathering people), while in (4b) the messengers dare not do anything to the king: they just come in front of him when they are summoned, and say what they have to say. In the case of (5a–b) (which are both hapaxes), the first is taken from a prayer to the god Tezcatlipoca, to request that the ruler who performed his office badly might die (the metaphorical idea is: you summoned him to let him smell your good things and use them properly, and he just spoilt everything); on the other hand, (5b) (taken from another prayer said to the ruler after he had been installed) may be glossed “he let the good things pass under your nose”. Even if not totally convincing, there is no contradiction.

Another doublet is **mach-tia** vs. **machi-tia**, which are both causative from **mati** *to know, to feel, to have intellectual or sentimental knowledge of*. Here we meet a morphophonemic problem: in both cases the last consonant is palatalized, with or without an apocope of the last vowel. However, there are good reasons to consider that **mach-tia** is a variant of the /-l-tia/ causative, and that **machi-tia** a variant of the /-tia/ causative. There are a few irregularities in verbs ending in /-ti/ and some in /-sa/, /-ka/ or /-ki/, not only in the case of causatives, but also in the case of passives, which also display the /-l-/. In most of these verbs, instead of the regular /-l-o/ ending (see below Section 3), the last vowel of the root disappears and is replaced by /-o/, in some cases with a palatalization of the consonant, e.g.:

- (6) a. **ni-piya-l-o**
I am kept (regular passive, see **piya-l-tia** in (3a))
 b. **ni-ma-cho**
I am known

So there might be a sort of rule of thumb saying “to form the causative, take the passive and replace /-o/ by /-tia/”, and for that reason **mach-tia** may be considered as the form, if any, which corresponds to the /-l-tia/ causative.

Now if we look at the corpus, the uses (and the translations) of **mach-tia** and **machi-tia** are very clear: **mach-tia** corresponds to *teach* and **machi-tia** to *inform*, see for instance:

- (7) a. (XI,9) **kim-machi-tia in tekwanime' in ka o tla-ma'**
 (s3)-O3PL.KNOW-CAUS/DET/beasts/DET/ASSERT/PAST/he hunted
It informs the (other) wild animals that he has made a catch
 b. (II,208) **ki-te-mach-tia-ya in teokwikatl**
 (s3)-O3-INDEF-KNOW(+I)-CAUS-IMPFT/DET/sacred song
They taught the sacred songs

- c. (VI,228) **Kaxtillan tla'tolli ki-mo-mach-tia**
 Spain/speech/(s3)-O3-REFL-know(+I)-CAUS
He studies the Spanish language

In other words, **mach-tia** is used to express that the person displays an activity (learning), while **machi-tia** refers to a mere piece of news (informing). This again fits pretty well with the general interpretation of /-I-tia/ vs. /-tia/ causatives.

But these phenomena must be examined within the general frame of argument structures and valency changes.

3. Argument marking and valence changing in Nahuatl

As was said before, Nahuatl is a head-marking language where argument places are marked by prefixes, and, apart from a very restricted number of “ambivalent” verbs, there is a strict opposition between intransitive verbs (which take one subject prefix), and transitive verbs (which take two prefixes, respectively subject and object).⁴

Intransitive verbs split into two subclasses which roughly correspond to what is now known as *unergative* vs. *unaccusative* verbs. To subclass I, however, belong not only typical active verbs such as **kisa go out**, **choka cry**, **tekiti work**, but also (provided their subject refers to a human being) quite a few nonactive verbs which in many other languages would be subclassified as unaccusative, such as **wetsi fall**, **kochi sleep**, **miki die**, etc. To subclass II belong all verbs with an inanimate subject, like **seliya grow green**, **kotoni become broken**, **waki, go dry**, **popoka give off smoke**, **tsilini tinkle** etc., plus a very restricted amount (probably less than ten) of verbs with an animate subject, referring to totally uncontrolled physical processes, e.g. **tson-istaya grow white hair**, **i'sika get breathless**, **omi-sawi get bony**, **wiwiyoka tremble**.

Although in both subclasses the subject markers (prefixes) are the same, the verbs differ in the morphology of the impersonal voice. Subclass I (unergative) has a **-wa** suffix (with in some cases minor alterations of the last vowel and/or the preceding consonant); subclass II (unaccusative) has a **tla-** prefix:

- (8) a. **ni-kochi, ti-kochi, kochi** (i.e. \emptyset -kochi) *I sleep, you (sg.) sleep, he/she sleeps*
 b. **kochi-wa** *s.o. sleeps, people sleep, everyone sleeps*
 c. **kixo-wa** *s.o. goes out*; **choko-wa** *s.o. cries*, **tekiti-wa** *s.o. works*, **wecho-wa** *s.o. falls*, **miko-wa** *s.o. dies*, etc. (or: *people go out, everyone goes out, etc.*)

- (9) a. **popoka in tletl** *the fire is smoking*
 b. **tla-popoka** *there is smoke*
 c. **tla-waki** *things are going dry, there is a drought*, **tla-tsilini** *there is a tinkling noise, etc.*
- (10) a. **ni-wiwiyoka, ti-wiwiyoka, (ø-)wiwiyoka** *I shudder, you shudder, s/he shudders*
 b. **tla-wiwiyoka** *everyone shudders, people shudder*
 c. **tla-tson-istaya** *people grow white hair*, **tla-[i]’sika** *people are out of breath*, **tla-omi-sawi** *people are getting bony, etc.*

The **-wa** suffix has an existential meaning and also appears in some denominative verbs:

- (11) **aska-yo-wa** *it swarms with ants* (**aska-ant**; **-yo-** abstract or collective suffix)

The **tla-** prefix is the same as the indefinite inanimate object prefix of transitive verbs:

- (12) a. **ni-mits-kaki** *I hear you*; **ti-nech-kaki** *You hear me*; **ni-k-kaki** *I hear him/her*
 b. **ni-tla-kaki** *I hear something*

There is also an indefinite human prefix **te-**, but it is never used in impersonal forms like (10b):

- (13) a. **ni-te-kaki** *I hear someone*
 b. ***te-wiwiyoka**

For an explanation on of these phenomena, see Launey (1981, 1994).

The two subclasses also differ in the morphology of causation. Actually, the fully causative **-tia** suffix (with possible minor changes in the last syllable of the root), which we saw in Sections 1–2, is restricted to subclass I, while subclass II has a variable and reduced morphology, which in most cases amounts to submorphemic vowel or consonant alternation. (This feature is almost unnoticed in otherwise so valuable colonial grammars.)⁵

- (14) **ni-k-wetsi-tia** *I make him/her fall*, **ni-k-mik-tia** *I kill* (“*make die*”) *him/her*; **ni-k-kochi-tia** *I put him/her to sleep*
- (15) **ni-k-watsa** *I dry it* (from **waki**); **ni-k-kotona** *I break it* (<**kotoni**), **ni-k-tsilinia** *I make it tinkle* (<**tsilini**); **ni-k-popotsa** *I make it smoke* (<**popoka**), etc.

Most transitive verbs also take the “double” **-l-tia** suffix:

- (16) a. **ti-tla-kwa** *You eat (sth.)*
 b. **ni-mits-tla-kwa-l-tia** *I make you eat, I give you sth. to eat*
- (17) a. **ti-k-kwa** *You eat it*
 b. **ni-mits-kwa-l-tia** *I make you eat it*

Besides the case of causative doublets met in Sections 1 and 2, a few transitive verbs form their causative without **-l-**. This is generally the case when the stem ends in **-i** (18a). There are also a few intransitive verbs, most of them ending in **-a**, which have a **l-tia** causative (18b). Finally, some causatives are formed by altering the whole final syllable, dropping the last vowel and/or palatalizing the final consonant: this occurs in both transitive and intransitive verbs (see (6b) above and (18c) below.

- (18) a. **ni-mitz-tla-i-tia** *I make you drink (i) sth.;*
ni-mic-tla-(i)tki-tia *I make you carry (itki) sth.*
 b. **ni-mitz-ahuiya-ltia** *I make you rejoice (ahuiya)*
 c. **ni-mitz-chok-tia** *I make you cry;*
ni-mitz-kix-tia *I make you go out (kisa)*

Why is it so? There could exist a purely morphophonemic explanation. In all cases the underlying form is **/-l-tia/**, or even a single suffix **/-ltia/**, and **/l/**, whatever its morphological status, drops in some phonological contexts, say, after **/i/**. Since most intransitive verbs end in **/i/** and most transitive verbs in **/a/**, the rule could be, instead of “add **-tia** to intransitive verbs and **-l-tia** to transitive verbs”, rather “add **-l-tia** to all verbs but drop **/l/** in some phonological contexts”. This is, among other specialists (and if I am not mistaken), Karen Dakin’s opinion (personal communication). Such a rule, however, does not account for the causative doublets which obviously speak in favor of an autonomous morphological status of **/-l-**, whatever its meaning. So my hypothesis is: there may be some effects of analogy which account for forming causatives by adding **-ltia** after some intransitive verbs (those which end in **/a/**) and **-tia** after some transitive verbs (those which end in **/i/**), and a few unclear cases in some specific phonological contexts like (6b) and (11c). But on the whole, the lack of **/-l-** is the norm for intransitive verbs, and its presence the norm for transitive verbs; and whatever the explanation for this, it must fit with the case of causative doublets and their meaning.

We can notice the same distribution for **/-l-**, which lacks in the case of impersonal verbs formed on intransitive ones (see 8b–c), but appears in passives formed on transitive ones (see (6a)). Again, we find some morphophonemic counterexamples (**/-l-o/** after intransitives ending in **/a/** and **/-wa/** after transitives ending in **/i/**):

- (19) a. **mayana-lo** *There is starvation (mayana be hungry)*
 b. **n-itki-wa** *I am being carried (itki carry s.th. or s.o.)*

It is easy to show that passives are just a subcase of impersonals.⁶ Impersonal verbs like **kochi-wa** express an unspecified subject, or, rather, an unspecified first (and, in this case, only) argument, or, better still, the lack of referential value in first argument position, which may be glossed “someone”, “(some) people”, “everybody” . . . The lack of referential value in second argument position is expressed by an indefinite prefix, human **-te-** (13a); non-human **-tla-** (12b). Now, if this situation applies to the first argument of a transitive verb, we find the so-called passive, see (6a–b) or (19b).

Passive verbs are strictly agentless intransitive ones; if the agent has to be expressed, we must shift back to the active transitive form. Impersonal verbs can be formed on transitive ones by combining the passive suffix and an indefinite prefix, (**te-** human, **tla-** non-human, or **ne-** indefinite reflexive), e.g.:

- (20) a. **te-kak-o** *people are heard, tla-kak-o something is heard, you can hear sth.*
 b. **ne-kak-o** *people listen to themselves/to each other*

It is highly probable that the final **/-o/** is actually a post-consonant allomorph of **/-wa/**. Nahuatl has a constraint on indefinite subjects, which can be found in many other languages, and can be expressed, roughly, as *If the referential value of a term is left unspecified, you cannot apply any predication to this term*. In other words, you can say “there is an entity whose existence and referential value are common knowledge to both speaker and hearer, and about this entity I say that . . .”, but it is strange to say “There is an entity whose referential value is unknown or irrelevant, and about this unknown or irrelevant entity I say that . . .”. So if an argument slot has an unspecified value in this sense, it is inapt to provide the subject. If it is the only argument, the impersonal form is used, which expresses that the predication is directly applied to a referential situation; this may be glossed as an existential predication (“*people die* is what can be said of the situation” = “there are casualties”). On the other hand, if there is a second argument slot with a specified referential value, this second argument can receive the morphosyntactic properties of the subject, and here we find the use of passives. But there is a proviso. Since the subject is provided by the second argument, there must be a reorientation in the argument structure of the verb. My hypothesis is that this is what the **/-l-/** suffix (and its allomorphs such as final vowel loss) stands for, and why it lacks in the impersonal of intransitive verbs. If we gloss **ni-kochi** (8a) as “Sleeping (**-kochi**) is applied to me (**ni-**), and **kochi-wa** (8b) as “There is (**-wa**) sleeping (**kochi-**)”, then **ni-piya-l-o** (6a) could be glossed “There is (**-o**) being called (**piya-l-**) applied to me (**ni-**)”.

We now face a new aspect of the problem. Why does the /-I-/ suffix (or its variants) also appear in some causatives, namely, most causative built on transitive verbs, but lacks in other ones, namely, causative built on intransitive verbs and just a few transitive verbs, those which involve an inactive experiencer? If the idea that /-I-/ is linked to reorientation is correct, then we must show that this also makes sense in the case of causatives. I will use below the relational representation as it was first used in Culioli (1971) and applied for Nahuatl in Launey (1981, 1986). While still agreeing with the general frame, and appreciating its pedagogical qualities, I am conscious that it may be a mere variant of other approaches of the unaccusative hypothesis.

4. A tentative formal interpretation

4.1

Let us assume that the prototypical frame of predication has the form of an oriented two-argument relation (speaking is expressing relations between terms). This relation has a *starting term* (or *source*), which is normally provided with agentive properties (this, usually but not necessarily, involves animacy), and an arrival term (or *goal*). This can be symbolized by (21)

$$(21) \quad xRy$$

But let us be more precise. Actually *x* and *y* refer to places or slots rather than particular, individual terms. Each of these places can either take the form of an individual term (which will be symbolized by *a* and *b*), or be left void, so (21) yields four possible schemata:

- (22) a. *aRb*
 b. *aR∅*
 c. *∅Rb*
 d. *∅R∅*

Here (22a) stands for straightforward transitive predication, with *a* as its subject and *b* as its object, (22b) for unergative intransitive predication, where the only argument comes from a starting term, (22c) for unaccusative intransitive predication, where the only argument comes from an arrival term, and (22d) for impersonal predication. Although this point is irrelevant to the present discussion, it is worth noting that the zero symbol does not necessarily mean that there is no referential value to this place. Rather, it marks that this particular relation is such that there cannot be a referential autonomy between *x* and *y*. Once you assign a

value to one place, you cannot have a different value at the other place, so it is as if there were no linguistic reality at that other place. In other words, you have one autonomous choice at one place, but for the other place your hands are tied by your first selection (it is a sort of unavoidable reflexive). If this is the case, why is there a difference between (22b) and (22c), instead of just one possibility? Probably because the semantic properties of the only argument may look more like those of a starting term or of an arrival term. According to these properties, one place is kept “full” and the other one “void”.⁷

4.2

Let us now call Δ an unspecified argument (i.e., there is some referential value at this place, but it is unknown or irrelevant). There is no problem if it is in the arrival term slot, because we have a definite subject, thus (22a) becomes (23), where Δ takes in Nahuatl the morphological form of an indefinite prefix (-te- or -tla-)

(23) aR Δ

Incidentally, this also explains why we have forms like (9b–c),⁸ which can be symbolized by \emptyset R Δ . The indefinite argument remains in the arrival term position, and the starting term position has an impersonal form, which we know is definite. (A good gloss of (2b–c) could be *It smokes (sth.)*, *it tinkles (sth.)*. Such forms do appear in many other languages.)

If the starting term is unspecified, however, it cannot provide the subject. This rules out (24a–b), which are the counterparts of (22a–b):

(24) a. * Δ Rb
b. * Δ R \emptyset

In a language where the specified subject rule applies, these are ill-formed structures, which must be restructured. To do this, Nahuatl uses a derivation in which R loses its verbal properties in two ways. In the first place, the starting term’s position is emptied (this will be symbolized by empty brackets, which Culioli borrows from Frege). In the second place, the tense-aspect-mood suffixes will appear on the existential -wa suffix (hence the former glosses *there is sleeping*, etc). But in the case of the transitive verb, where the arrival term’s position is not empty, there must be one more change – a reorientation (symbolized below as R’). We now have embedded forms to which the existential predication is applied:

(25) a. <()Rb>-wa
b. <()R \emptyset >-wa

4.3

Let us now see how causation can be symbolized in this frame. In all cases we have a *causer*, i.e. a “new” agent (let us call it *c*) by whose action of any kind an event occurs. In the case of an unaccusative intransitive verb, the starting term’s (i.e. agent) place is void, the simplest treatment is that this empty place attracts this new agent. This can be symbolized:

(26) **cRb**

which accounts for cases like (15), and also in other languages for the so-called *ergative verbs* like *burn*, *grow* etc. (see Note 5). But if the starting term’s place is not empty, there is a conflict between two agents, and the causative form must be constructed as a compound relation. One is the embedded (transitive or intransitive) relation **R**, the other one is the causative relation (let us call it **F**) between a starting agentive term **c**, and some kind of arrival term. What could be this arrival term?

The first interpretation could be that the arrival term of **F** is just the relational structure $\langle \mathbf{aRb} \rangle$ or $\langle \mathbf{aR}\emptyset \rangle$, the gloss being “*c* acts in such a way that **aRb** or that **aR**”. In other words, causation is causation of an event (Shibatani 1976):

- (27) a. **cF<aRb>**
 b. **cF<aR**∅

But if we look more carefully into it, there may be another interpretation, and another gloss. How can one act in such a way that an active event occurs? The best way is to persuade the agent to perform this action (by whatever means, from pointing a gun to using soft persuasion). In that case, the gloss is “*c* acts on *a*, and **aRb** or **aR**”, where we see that **a** is *both the arrival term of the relation F and the starting term of the embedded relation R*. This can be symbolized as:

(28) **<cFa> . <aRb>**

In other words, there is a causing event (action of **c** on **a**) and a caused one (**aRb**). So the term **a** is shared by two relations, being the arrival term of the first one and the starting term of the second one. But this is only a flat, conjunctive structure (symbolized here as in logic by a point). To form a truly causative construction, we must establish a syntactically hierarchic relation where the **F**-relation (representing the causing event) behaves as the dominant, superordinating one and the **R**-relation (representing the caused event) as the subordinate, embedded one.

Two remarks come immediately to mind. In the first place, (28) is pretty similar to a relative construction, where we have a common referential value between an argument in a main clause and an argument in a subordinate relative clause. In the second place (and just as it happens in relative clauses), things cannot remain as they are in (28). If we have a common referential value at two places, it only will

appear once (and probably in the main clausal structure). In the other place (i.e. probably in the embedded structure), it will be replaced by a dummy value of some sort (hence the similarity between relative pronouns and interrogative words in so many languages). This can be symbolized as:

$$(29) \quad \overbrace{cFa} \langle ()Rb \rangle$$

This means that whatever the referential value of the starting term in the embedded structure, it cannot be different from the arrival term in the main structure. So again we find an embedded structure with no referentially specified starting term. If it has a full starting term, it receives the same treatment as in (24a), with a reorientation of the embedded relation:

$$(30) \quad cFa \langle ()R'b \rangle$$

The rest is just a surface reorganization of the morphemes – *c* as a subject, *a* and *b* (or Δ) as objects (with *b* dropping in some contexts, see Note 3), *R'* as the verb stem plus *-l-* and *F* as the suffix *-tia*.

Now this accounts for the presence of *-l-* in the causatives of most transitive verbs. But it also explains why this *-l-* suffix lacks in some verbs of knowledge of perception, and precisely to express that there is no action on an experiencer-agent, but a mere causation of an event which comes into knowledge of an experiencer. In that case, the structure (27) cannot appear, and we necessarily must shift to the structure (26a). We also understand that with an intransitive verb things are always unclear; if we have the structure (26b) no *-l-* appears, but if we have the equivalent of (27), followed by a deletion of the referential value of the starting term, we find an embedded structure of the form $\langle ()R\emptyset \rangle$, which (just like in the case of impersonals) does not lead to reorientation.

4.4

There is one more argument for this formal representation. In reflexive indefinite constructions such as *ne-kak-o* (20b), there is a coreference⁹ between the two arguments, so that if one of them is left unspecified the other one also is. This could be symbolized by (31a), where this coreference is noted, and (31b), where we see the reorientation towards the second argument, but also the deletion of both (which is expressed in Nahuatl by the indefinite reflexive prefix *ne-*):

$$(31) \quad \begin{array}{l} \text{a. } \Delta_i R\Delta_i \\ \text{b. } ()_i R' ()_i \end{array}$$

Now, if we go back to examples (3a–c), which combine reflexive and causative structures, we see that in (3c) the embedded structure is a reflexive one; and again,

this leads to the occurrence of both *-ne-* and *-I-*, just as in the case of impersonal reflexive. This is a strong argument in favor of our analysis (*-I-tia* causatives have an underlying structure where the starting term has no autonomous referential value). In the case of (3b), on the other hand, the reflexivity comes from a coreference of the starting term of the causative relation and the arrival term of the embedded relation – *c* acts in such a way that *a* sees *c*. But as it was pointed out earlier (Sec. 2.2), this means that there is no action from the causer onto an agent. This is why this cannot be treated as (27) (which would lead to the presence of *-I-*), and the only possible treatment is (26a), which expresses that at least there is no action on the experiencer.

One could object that the behavior of *F* is somewhat erratic, since it may take both an individual term and a relation structure as its second argument. But after all this is no more surprising than what happens with verbs which can take both a NP and a sentential (or clausal) object, like *say* or *know*, or in French *dire* ‘say’, *savoir* ‘know’, but also *vouloir* ‘want’ and, precisely, *faire* ‘make/do’, which is used like an ordinary transitive verb (32a), but also as a causative auxiliary (32b–c), and at least in some cases – the detail being irrelevant here – may take a clausal object (32d):

- (32) a. **Elle fait un gâteau** *She is making a cake*
 b. **Elle le fait rougir** *She makes him blush*
 c. **Elle lui fait avouer la vérité** *She makes him confess the truth*
 d. **Cela fait que je suis en retard** *This is why I am late, lit. This makes that ...*

It is true that NP-objects of these English and French verbs refer to inanimate entities, not to animate agentive ones. It is intuitively normal to use *make* or *faire* as a causative auxiliary, since the caused event is the result of an action as well as an artifact of any kind, but this is not the case for the causee. However, it may be deceptive to equate *F* with English *make* or French *faire*. We should rather think of what in the domain of interpersonal manipulation could be the equivalent of *tell* in the domain of discourse. Maybe glosses like *lead* or *bring* would be intuitively closer to what, at any rate, is an abstract relation.

5. Conclusion

The formalization above is a mere suggestion. The point at issue was; why are there such causative doublets, with these meanings and these morphological markers? The data could be represented by other symbolizations, for instance in the frame of Perlmutter’s arc pair grammar or maybe by the theory of empty categories in

the latest versions of generative grammar, or even dealt with and explained with no formalization at all. But whatever the symbols and the rules of combination may be, I cannot see any other explanation for doublets such as *it̄ta-l-tia/itti-tia* than this: If the causee is clearly agentive, then the causing event is viewed as an action on this causee, which is the hub of the relation between the causing and the caused event, while if the causee is not agentive, then the causing event is viewed as an action which directly leads to the existence of the caused event. I do not claim that this is necessarily true for all languages, although it may match other observations. But it is, at least, a fruitful hint, and, semantic as it may be, it perfectly accounts for the morphology of Nahuatl causative verbs. And in a strongly head-marking language like Nahuatl, verb morphology is a good mapping of syntactic structure.

Notes

1. In these quotations, I will use the original spelling of both Spanish and Nahuatl words.
2. For an overall typology and theory of causatives, see Shibatani (1976) and Shibatani & Pardeshi in this volume.
3. Unless otherwise specified, these examples are taken from the *Florentine Codex*. The first number (Roman) refers to the book (I through XII), the second one (Arabic) refers to the page in Anderson and Dibble's edition at the University of Utah Press. For clarity's sake, I will hereafter use a phonological notation. The square brackets are used to restore underlying phonemes which drop in some morphophonemic contexts. In the morphemic analysis below, (S3) stands for the zero marker of 3rd person subject; (*O3) stands for a 3rd person object slot which is left unmarked when there is another definite object.
4. One could expect three prefixes in the case of ditransitive verbs (like *maka give*, *ilwia tell*, and all causatives – and applicatives – derived from transitive verbs, but this is true only when there is at least one indefinite or reflexive prefix: if both objects are definite, one prefix must drop, see Note 3.
5. These have somewhat deceptively been called *ergative verbs* by some authors; they are also known as *symmetric verbs* or *semi-causative verbs*, see Jespersen (1929), Lyons (1969), Halliday (1970), Lagane (1971), Burzio (1986), Launey (1986), Battye (1992), Bassac (1995).
6. Also see Langacker (1976), Langacker and Munro (1975).
7. In the case of impersonal verbs, the relation is such that when you have chosen it you cannot give an autonomous referential value to any argument any more. In other words, the class of arguments is restricted to a singleton, hence the paradox that it is expressed with a definite pronoun or affix (there is no ambiguity: only rain can rain – unless the verb is used in a figurative sense), but it seems to have no linguistic reality: see Launey (1994) for this interpretation of impersonal verbs.
8. (10b–c) is a bit more tricky, see Launey (1994) for an explanation.

9. A casual coreference within the two-argument structure of a transitive verbs: this is different from the necessary coreference which is a property of the intransitive subclass of verbs.

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The notion of transfer in Sikuani causatives

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1.

I will focus here on one of the three phenomena that in some way are related to causation in Sikuani: the auxiliary “make,” which derives from a full verb. On the basis of a notion of “transfer,” I will attempt to give a unitary account for all uses of this verbal form. The other two phenomena I will just make a brief mention of. They are: 1) a class of postural intransitive verbs which can function either as full verbs or as auxiliaries, and which have causative derived counterparts; and 2) two applicative constructions which relate in an interesting way to the semantics of causation.

Sikuani is a language spoken by about 20,000 people in the savanna area west of the middle course of the Orinoco River, between Rivers Meta and Guaviare. A few thousand speakers live on the Venezuelan side of the Orinoco, around the city of Puerto Ayacucho and on the Manapiare River, a tributary of the Ventuari. The language belongs to the small Guahibo family, which comprises also Cuiva, Guayabero and Hitnü, and which has not, so far, been convincingly affiliated to any larger group of languages.

The language is fairly agglutinative, with nominal affixes for person, gender, class, number, aspect, and verbal affixes for person, number, aspect-mood, tense, valency, directionality. It has a (small) class of adjectives, and a sub-class of verbs (most of them stative) which behave in many ways like nouns. Noun predicates need no copula nor any existential verb. Verb and noun predicates take auxiliaries out of a relatively rich class, some of them being also lexical verbs. The auxiliary comes after the main verb. Verbs show a mood contrast, virtual vs. factual, marked on the suffix closest to the root. Nouns can incorporate. The order of elements is *SOV* (far from strict) and *o-V-s*. Affixes for third person *o-* and *-s* have null phonological form. Lexical verbs can take up to three core arguments, but only two of them are affixally present on the verb. The alignment is accusative-type.

Noun phrases referring to core participants do not take case morphology. Oblique noun phrases take postpositions.

2.

There exists a class of four postural verbs, “be sitting,” “stand,” “be lying,” and “be suspended” that, besides their literal spatial meaning, have endured a strong grammaticalization process and are, as verb auxiliaries, central to the expression of aspect and modality. They know no restriction regarding their main verb valency. On the other hand, their lexically derived causative counterparts, “seat,” “raise,” “lay,” and “hang,” only combine with transitive verbs and are less accessible to grammatical senses. Now, the alternation of intransitive/transitive postural auxiliary on a transitive verb has an unusual effect: first, both describe body static attitudes, and, second, they operate a switch as to which participant has his attitude described. The intransitive auxiliary stands for the subject participant posture, whereas the transitive stands for the object participant posture.

- (1) a. **ne-taya-eka-me**
1°Object-See-BeSitting-2°Subject
 “you looked at me (*you* sitting)”
- (2) b. **ne-taya-eta-me**
1°Object-See-Seat-2°Subject
 “you looked at me (*me* sitting)”

Causative auxiliaries retain some of the aspectual and modal aptitudes of their intransitive counterparts. For example, they can express something of an agentive resultative, “act on an entity (main verb) and leave it in the resultant state for a certain amount of time (auxiliary).” On the modality side, “lay,” which as a full verb also means “throw away, abandon,” marks commiseration from the speaker towards the object participant.

As for applicative constructions, there are two relational preverbs with causative meaning, one more direct and often physical, the other more inductive. The direct causative preverb could be etymologically related to the word for “hand.” One of its possible senses – presumably the most basic one – is instrumental applicative.

- (3) **Mahalu computadora Ø-ka-yakina-Ø baharapaliwaisianü**
 Mahalu/Computer/3°Object-Handling-Carve-3°Subject/ThoseStories
 “Mahalu wrote these stories with the computer”

As a causative it encodes strong coercion – in the example, by means of some mental power:

- (4) **itsamatakabi Phurunaminali pübü Ø-ka-pitsapa-Ø**
 OneDay/God/Ant/3^oObject-Handling-GoOut-3^oSubject
 “one day, God made the ants go out”

Both preverbs admit the comitative feature, as a possibility for the direct one,

- (5) **Kuwainü Ø-ka-nawiata-Ø pihawa**
 God/3^oObject-Handling-GoBack-3^oSubject/HisWife
 “God took his wife back home”

and as an obligation for the inductive one:

- (6) **Yakukuli Ø-barü-nahaetabihiriba-Ø**
 Yakukuli/3^oObject-Induction-FlyAway-3^oSubject
 “Yakukuli flew away taking her with him”

Comitative sense is totally excluded for the causative proper auxiliary, to which we turn now.

3.

Exana is a lexical verb meaning “make, create, fabricate, give birth to, turn into.” As “create” it behaves like any other transitive verb:

- (7) a. **ponü naehawa Ø-nikata-Ø**
 ThatOne/Tree/3^oObject-Cut-3^oSubject
 “that one cut the tree”
 b. **ponüyo patomara Ø-exana-Ø**
 ThatSmallOne/ThatVillage/3^oObject-Make-3^oSubject
 “that small one created that village”

Ditransitive verbs in this language display an alignment pattern of the type Dryer (1986) calls primary/secondary objects. That is, the grammatical hierarchy which obtains between both objects of a “give” verb has the recipient outranking the patient (the transferred entity), in contradistinction to the direct/indirect objects type, like in French, where we have a hierarchy patient-object > recipient-object. In Sikuani the same properties are attached to the object of a simple transitive verb and the recipient of a ditransitive one. As an illustration of this alignment in verbal morphology we have:

- (8) a. **ka-konita-tsi**
*2° Object-Whip-4° Subject*¹
 “I whipped you”
- b. **tsema ka-rahuta-tsi**
Tobacco/2° Object-Give-4° Subject
 “I gave you tobacco”

Since, cross-linguistically, object hierarchy manifests itself formally in very similar ways whatever the alignment pattern is (primary/secondary objects vs. direct/indirect objects), I see no reason to discard the traditional terminology for these grammatical relations. Both direct object and the so-called primary object display morphosyntactic primacy over indirect/secondary objects, and there is no morphosyntactic ground for distinguishing the primary object from the direct object. In other words, I subscribe to the view of grammatical relations as purely morphosyntactically characterized categories, as opposed to the view such as Dryer’s, where the semantic roles and their alignment patterns are taken into consideration in determining grammatical relations. Thus, I will use the following pairings for Sikuaní ditransitive constructions:

grammatical relations	semantic roles
direct object	recipient
indirect object	patient

As “turn into,” *exana* behaves like ditransitive verbs:

- (9) a. **pebi tsema Ø-rahuta-Ø petiriwa**
Man/Tobacco/3° Object-Give-3° Subject/Woman
 “the man gave tobacco to the woman”
- b. **pebi pewonotoxi tulukisi Ø-exana-Ø**
Man/Teeth/Collar/3° Object-Make-3° Subject
 “the man made a collar out of the teeth”

That is to say, a direct object is indexed on the verb as a prefix and can be represented by a noun phrase, and an indirect object – if overt – is represented by a noun phrase, neither marked as oblique nor co-indexed in the verb.² In example (9a) the direct object is the recipient *petiriwa*, “woman,” and the indirect object is the transferred thing, *tsema*, “tobacco.” In (9b) the direct object is *pewonotoxi*, “teeth,” and the indirect object is *tulukisi*, “collar.” (Word order of objects is not absolutely criterial.) That the roles are distributed in this way in (9b) is visible in the overt verbal morphology example which follows:

- (10) **petiriwa ka-exanaena-tsi**
 Woman/2° Object-WillMake-4° Subject
 “I will make a woman out of you”

In examples like (9b) and (10) the event reported by the verb amounts to nothing more than transferring a conditions-of-existence set into a recipient. In (9b) **pewonotoxi**, “teeth,” represents the recipient, treated as a direct object, and **tulukisi**, “collar,” the transferred conditions-of-existence set, treated as an indirect object. And so do, respectively, **ka-**, “you,” and **petiriwa**, “woman,” in (10). In a sense, **exana**, which reports the event in question, is semantically abstract in that it describes but the transfer – conditions B going onto entity A –, without overtly expressing by way of what kind of particular action (sew, carve, etc.) the transfer is accomplished. We can say, in this same vein, that **exana**, “create,” of example (7b) takes existence itself as the conditions-of-existence set to be transferred.

4.

Now, as a causative, **exana** behaves like an auxiliary. It appears as a bound form after the verb stem, capturing all of the postverbal inflection.

- (11) a. **phirapa-me**
 StumbleAndFall-2° Subject
 “you stumbled and fell down”
 b. **ka-phirapa-exana-tsi**
 2° Object-StumbleAndFall-Make-4° Subject
 “I made you stumble and fall down”

The semantic parallel with the lexical uses is obvious: be it the coming to existence itself – (7b), or a sort of resultant bunch of properties – (9b), or some kind of behavior – (11b), in all three cases we have a conditions-of-existence set being transferred by initiative of an external entity. The formal expression for the three kinds of transferred sets differ:

- *coming to existence* does not surface,
- *resultant bunch of properties* surfaces as a noun phrase,
- *behavior* surfaces as a main non-finite verb,

whereas the expression of the external entity remains the same: the subject. To rephrase the “transfer” notion – similar to that of “transition” proposed by Moreno (1993: 159 and Note 3 p. 163) – we could say that, in all cases, the entity represented by the subject causes the entity represented by the object to *adopt* some

conditions-of-existence set. This assertion holds when a transitive verb comes to be causativized.

- (12) a. **penakueto Ø-konita-Ø awiri**
 Child/*3^o Object*-Whip-*3^o Subject*/Dog
 “the child whipped the dog”
 b. **taena penakueto Ø-konitsia-exana-Ø awiri**
 MyMother/Child/*3^o Object*-Whip-Make-*3^o Subject*/Dog
 “my mother made the child whip the dog”³

Here, the “whipping the dog” is the behavior adopted by the child on mother’s instigation. The following examples, with overt prefix morphology, show that the causee-recipient is indeed the direct object of the verb complex:

- (13) a. **taena ka-konitsia-exana-Ø awiri**
 MyMother/*2^o Object*-Whip-Make-*3^o Subject*/Dog
 “my mother made you whip the dog”
 b. **naka-yapūtae-exana-Ø nakua liwaisi**
1^o PluralInclusive Object-Know-Make-*3^o Subject*/World/Story
 “It (tradition) makes us know the story of the world”

These examples illustrate the fact that in the need of reorganizing the argument structure of the clause, Sikuani causatives appeal to a device different from Comrie’s demotion down the case hierarchy to the next available empty slot, typical of French and many other languages (Comrie 1976). I would use a Martinet’s diachronic phonology metaphor for the way Sikuani operates: the propulsive chain. This device begins to operate when the causer usurps the subject position. The former-subject causee is pushed to the direct object position. If nothing is there, no other changes occur. This is the case of causativized intransitive verbs. If something already fills the object position, as in the case of causativized transitive verbs, this something, the former-object, is ousted a step further and takes the indirect object position. “Case” hierarchy holds for both strategies, what changes is their mechanics.⁴

The propulsive chain device is no absolute constraint. We will see in a moment cases in which the causee appears as an indirect object. I give here the only instance available where the causee surfaces as an oblique constituent, with the basically spatial location suffix *-tha*.

- (14) **baharaponü pihawa-tha Ø-setsia-exana-Ø katsanihira**
 ThisOne/HisWife-*Locative*/*3^o Object*-Cook-Make-*3^o Subject*/PoisonJuice
 OfManioc
 “this one made his wife cook the poison juice of manioc”

No justification is at hand, other than pointing out that the suffix is also found with instrumental meaning (and accompaniment).

There are no convincing cases of ditransitive verb causativization in my data.⁵ We have already seen the verb *rahuta*, “give,” in (9a). An example of causativized *rahuta* appears in:

- (15) *tsikirinewüthüyo Ø-mi-rahuta-exana-biaba-Ø*
 SmallJaguar/3^o Object-Breast-Give-Make-Iterative-3^o Subject
 “he (Rabbit) made her (Mother Jaguar) “breast-feed” the baby jaguar
 several times”

The causer, Rabbit, takes the subject position, and pushes the causee, Mother Jaguar, down to the direct object position. Then, “small jaguar,” which occupied the direct object position as recipient of “give,” slips into the indirect object position, an unmarked and non-coreferenced noun phrase. The problem at this point is: what happens to the former indirect object, the transferred participant “breast,” which stands at the end of the pushing chain? Its demotion puts it off the core argument set. In the example it simply incorporates into the verb. Of course, we could expect to find such demoted patient indirect objects as oblique constituents. No available data show this phenomenon. On the other hand, body part nouns have such a propensity for incorporating that probably “breast” is not really at the end of the chain in (15): I assume it could have been already incorporated in the non-causative construction.

5.

Let’s turn now to the saliency properties of the causer. Of course, it is typically salient, most of the time human. But some non-animates can be considered as good causers, for example psychotropic substances:

- (16) *xuipa ne-asaü-exana-Ø*
 CapiPlant/1^o Object-BeStrong-Make-3^o Subject
 “capi makes me strong”

On the contrary, a stone is not accepted as a causer:

- (17) **iboto ka-phirapa-exana-Ø*
 Stone/2^o Object-StumbleAndFall-Make-3^o Subject
 “the stone made you stumble and fall down”

This has to be expressed with “stone” as an oblique constituent of the original intransitive clause:

- (18) **iboto-tha phirapa-me**
 Stone-*Locative*/StumbleAndFall-2° *Subject*
 “you stumbled over the stone and fell down”

As for the causee’s saliency properties, causativization seems to be indifferent to them. Speaking of a person:

- (19) **Ø-hueya-exana-hü**
 3° *Object*-Swim-Make-1° *Subject*
 “I made him swim”

Speaking of a plant:

- (20) **Ø-huwia-exana-hü**
 3° *Object*-Grow-Make-1° *Subject*
 “I made it grow”

Speaking of a rock:

- (21) **Palupaluma ibotonü Ø-tsita-baka-exana-Ø baharaponü**
 Rabbit/Rock/3° *Object*-*Apparently*-Cow-Make-3° *Subject*/ThisOne
 “Rabbit made the rock look like a cow for him (Jaguar)”

Now, when it comes to the hierarchization of objects, causativization of transitives is sensitive to the saliency ranking between original subject and object. I will show that with a series of connected examples. **Namatamota** is an intransitive verb meaning “to be valuable.”

- (22) **patahakuene namatamota-Ø**
 OurCustoms/BeValuable-3° *Subject*
 “our customs are valuable”

By causativizing it we have:

- (23) **patahakuene pa-Ø-namatamotsia-exana-hü**
 OurCustoms/*Plural*-3° *Object*-BeValuable-Make-1° *Subject*
 “we prize our customs (lit.: we make our customs be valuable)”

Now let us transitive **namatamota**, “to be valuable,” with the applicative preverb **to-** “involving, concerning,” which typically introduces a salient new participant:

- (24) **pabu bitso ne-to-namatamota-Ø**
 ThisHammock/Much/1° *Object*-*Concerning*-BeValuable-3° *Subject*
 “I’ve paid a high cost for this hammock (lit.: this hammock is very valuable for me)”

If we are to causativize (24), we won't see any push-chain at work, since the causee **pabu**, "hammock," is forced to let the salient direct object untouched. What it does is skip over that argument position and get into an indirect object slot:

- (25) **xamü pabu bitso ne-to-namatamotsia-exana-me**
 You/Hammock/Much/*1° Object-Concerning-BeValuable-Make-2° Subject*
 "you made me pay a high cost for this hammock (lit.: you made this hammock be very valuable for me)"

Also:

- (26) **apo-pa-ka-to-sahina-exanae tsane-tsi-behe**
Negation-Plural-2° Object-Applicative-Lack-Make/Future-4° Subject-Dual
 "I won't let it (food) run out for the two of you"

This means that the semantic hierarchy of participants overrides their argument-based hierarchy, neutralizing the formal device of argument redistribution, the propulsive chain.⁶ That the semantic hierarchy does not rest on person but on something like animacy or humanhood is made clear in the following example, where the untouched salient direct object is human third person:

- (27) **itsa rikuwanü tsipae, bitso baitsi pematamo**
apo-Ø_i-to-hone-exanae-nü tsipae
 If/IAMARichWoman/*Irrealis/Much/Focus/Prices/*
Negation-3° Object-Concerning-Enter-Make-1° Subject/Irrealis
 "if I were a rich woman, I wouldn't impose them; (Indians) such high prices (lit.: I wouldn't make high prices enter for them)"

6.

I'll make a brief mention of a verb **hanita**, which as a full verb means "to be hungry, to desire, to wish." It behaves much like **exana** in its causative auxiliary function. Whereas the latter bears the idea of "transferring a conditions-of-existence set onto an entity," what **hanita** seems to do is "mentally project a conditions-of-existence set onto an entity." This projection can be a wish, as in

- (28) a. **tüpa-Ø**
 Die-3° Subject
 "he died"
- b. **Ø-tüpae-hanita-hü**
 3° Object-Die-Wish-1° Subject
 "I wish he dies"

or a reproach, as in

- (29) a. **aphaetabi-tsi**
BeLazy-4^o Subject
 “we are lazy”
- b. **apo-naka-aphaetabia-hanitsi-Ø!**
Negation-4^o Object-BeLazy-Wish-3^o Subject⁷
 “let them not reproach us to be lazy!”

Let us return to *exana* in order to see two valency reducing mechanisms.

7.

The first is the reflexive. A prefix *na-* fulfills the object paradigm position on the verb, and entails coreference between subject and object.

- (30) a. **Ø-tahuita-me**
3^o Object-Burn-2^o Subject
 “you burnt him”
- b. **na-tahuita-me**
Reflexive-Burn-2^o Subject
 “you burnt yourself”

As a transitive verb, *exana* can be reflexivized and means “to create oneself, to appear, to be born.”

- (31) **Tsamanimonae bahaya matakabi na-exana-Ø**
Tsamani People/Formerly/Time/Reflexive-Make-3^o Subject
 “the Tsamani people appeared in times past”

As a ditransitive verb “to transform,” it is reflexivized as “to become.”

- (32) **Sikuani Wowai na-exana-Ø**
Sikuani/White/Reflexive-Make-3^o Subject
 “the Sikuani became Whites”

In both cases the subject participant transfers the conditions of existence onto himself – the very existence in (31), and “being White people” in (32).

(No volition is necessarily attached to the subject participant, as it appears when the initiative of the transformation is due to someone else, just by means of proffering a wish:

- (33) **Sua!** **Newüthüyo na-exana-re!** **hai Adai.**
 WishExclamation/LittleJaguar/Reflexive-Make-Imperative/Say/Adai
 “Turn into a little jaguar! said Adai.”

The question now is about the relation that **Wowai** in (32) bears to its verb. Since it is a noun phrase neither marked nor coreferenced on the verb, one has to consider it as an indirect object.

In a reflexive causative of a one-place verb, a direct object position is generated by the causative. This position is then filled by the reflexive. Hence, the global construction remains intransitive.

- (34) **na-tüpaexana-Ø**
 Reflexive-Die-Make-3° Subject
 “he plays the dead man (and not: he makes himself die)”

In the reflexive of the causativized two-place verb, the final product is, as expected, a two-place one. But the status of the extant non-subject argument is not that of a direct object. For the sake of clarity I reconstruct two preliminary examples.

- (35) a. [?]**oro_i ponü; Ø_j-wünüka-Ø_i**
 Worms/ThatOne/3° Object-Fill-3° Subject
 “worms filled that one up”
 b. [?]**Kuwaik oro_i Ø_i-wünüka-exana-Ø_k ponü;**
 God/Worms/3° Object-Fill-Make-3° Subject/ThatOne
 “God made the worms fill that one up”
 c. **Kuwaik oro_i na_k-wünükae-exana-Ø_k**
 God/Worms/Reflexive-Fill-Make-3° Subject
 “God made the worms fill himself up”

In (35b) we would have the causer, “God,” bringing things about (“worms fill that one up” of (35a)) by pushing the causee, “worms,” off the subject slot and down into the direct object slot. This is in line with what we have seen until now. In (35c), the attested example, the event God causes to happen affects himself. The causer referent preempts the direct object slot as a reflexive prefix, not allowing the causee to land into it. The causee has to skip the direct object position and surface as an indirect object, that is, a noun phrase unmarked for morphological case and non-coreferenced on the verb, just like **Wowai** in (32).

We have here the second instance of a neutralized propulsive chain. And we can presume that the motivation is not so different from the first instance – example (25), inversion of the semantic hierarchy: after all, the causer is the more salient participant in the overall event. The coreference showed by (35c) between the reflexive and its antecedent is commonplace: the reflexive is, as we expect, controlled by the subject. Another example of that is:

- (36) a. \emptyset_j -toxibia-exana- \emptyset_i
 “he_i made her_j copulate with him_k”
 b. na_i-toxibia-exana- \emptyset_i
 “he_i made her_j copulate with him_i”

“Copulate” is a transitive verb. In (36a) the causee is a direct object, the patient of the copulation being an indirect object with no noun phrase expression (and, naturally, no coreference on the verb). In (36b) the patient is the causer himself. Hence the reflexive construction, leaving to the causee the indirect object position. Notice that the indirect object has another property in common with the other two core arguments: its nominal expression can be omitted.

Now let us see the following example:

- (37) Palupaluma_k na_i-koxi-xaeya-exana- \emptyset_k Newüthüwa_i
 Rabbit/*Reflexive*-Children-Eat-Make-3^oSubject/Jaguaress
 “Rabbit made Jaguaress eat her own children”

Koxi, “children” bears no grammatical relation to the verb because it has been incorporated. We have a verb “eat-children,” which can remain transitive: often enough, incorporating a body-part noun yields an applicative incorporation, in which the object slot is kept open to accommodate a raised “possessor.” The causer-subject “Rabbit” is not affected by the event he causes to happen. Who is affected is the causee, “Jaguaress”: she eats her own children. Because of the reflexive mark on the verb, which blocks the object prefixation, “Jaguaress” can’t bear but the indirect object relation to the verb (neither marked obliquely, nor co-indexed in the verb). Thus we get an odd reflexive-antecedent relation in terms of reference: the reflexive has no subject as an antecedent, since it must co-refer with the indirect object causee. There seems to be a competition between two subjects for the control of the reflexive: the matrix verb subject – the causer, which wins in (35c) – and the embedded verb (formerly) subject – the causee, which wins in (37). What the criteria for settling the conflict are is not yet known to me. Maybe some saliency (semantic or pragmatic) hierarchy is at work.

8.

We now turn to the other valency reducing mechanism. There is in Sikuani a functional equivalent of passive for transitives with two third person arguments. The formal device consists of filling the subject suffix position on the verb with the first person plural inclusive morpheme, -tsi, which I call, for this and other reasons, a fourth person mark. The subject becomes a dummy form, inaccessible to reference.

The object becomes the prominent participant because it remains the only one to be able to refer and to surface as a noun phrase.⁸

- (38) a. **Tsonü_i Newüthü_j Ø_j-beyaxuaba-Ø_i**
 AntEater/Jaguar/*3^o Object-Kill-3^o Subject*
 “Ant-eater killed Jaguar”
- b. **Newüthü_j Ø_j-beyaxuaba-tsi**
 Jaguar/*3^o Object-Kill-4^o Subject*
 “Jaguar was killed”

Besides the restriction on person there also exists a semantic restriction: the object must be high on the saliency hierarchy, basically human (exceptions seem to have clear motivations like discourse topicality, animal personalization, etc.). This is also the reason why indirect objects of three-place predicates do not passivize: they are typically low in saliency. This preference for (salient) direct object against (non-salient) indirect object shows up in the lexical ditransitive verb construction which follows:

- (39) **Rosalba_i kaebaxuto_j Ø_i-kowaita-tsi**
 Rosalba/OneBook/*3^o Object-Lend-4^o Subject*
 “Rosalba was lent one book (and not: one book was lent to R.)”

A test for the correctness of reference index assignments in (39) relies on the reference properties of the dual verbal suffix, **-behe**. It is totally sensitive to the saliency status of participants. In active constructions it corefers with the intrinsically more salient argument (person, animacy, etc.), be it subject or object. In passive constructions it always corefers with the most prominent argument, the direct object, as is visible in the following examples with three-place (applicative) predicates, both about a couple of persons lost in the wild:

- (40) a. **bole_j metha Ø_i-to-exana-tsi-behe_i**
 EvilSpell/Maybe/*3^o Object-Concerning-Make-4^o Subject-Dual*
 “maybe the two of them were put a spell on”
- b. **unutha pethahabihawa_j Ø_i-to-buata-tsi-behe_i**
 InTheWoods/ChoppedThing/*3^o Object-Concerning-Lay-4^o Subject-Dual*
 “the two of them benefited from chopped meat being laid for them in the woods”

This passive-like construction, which hereafter I will call “passive,” is used for causerless causative constructions: the subject position on the verb, which should host the causer pronominal marker, receives instead the fourth person suffix, and no noun phrase expresses the causer. An example of intransitive verb:

- (41) Ø-**huna**e-exana-tsi
 3^oObject-Climb-Make-4^oSubject
 “she was made to climb”

An example of transitive verb:

- (42) Ø_i-**hina**e-exana-tsi **duhai**;
 3^oObject-GetWildFood-Make-4^oSubject/Fish
 “he was made to get fish”

Evidence for the assumption that the passivized argument in (42) is indeed “he,” represented by the zero prefix, and not **duhai**, “fish,” is found in the dual agreement suffix on the verb. The following example is extracted from a Sikuani version of the Hansel and Gretel tale. Brother and sister are captive in the witch house:

- (43) iso_i Ø_i-**hotsia**-exana-tsi-behe_i
 Firewood/3^oObject-Carry-Make-4^oSubject-Dual
 “they both were forced to carry firewood”

According to what has just been said, no passive construction should occur when the object is non-third person. But remember that the applicative preverb **to-**, “involving, concerning,” is able to introduce a salient new participant who, once included in a causative construction, clings to the direct object position, forcing the causee to slip one more step down to find another argument position (examples (24)–(25)). The passive construction retains this saliency-based restriction to the propulsive chain principle. I will illustrate the point with **bihiobi**, “to be miserable,” a member of the previously mentioned class of stative verbs which behave much like nouns. What we have to know here about this verb is that, contrary to the other verbs already seen, it doesn’t constitute a complex word together with **exana** (which makes the latter more a causative verb and less an auxiliary).⁹

- (44) [?]patahasalinai_i **bihiobi**-Ø_i
 OurAncestors/BeMiserable-3^oSubject
 “our ancestors were miserable”

By causativizing it we get:

- (45) [?]patahasalinai_i **bihiobi** Ø_i-**exana**-Ø_j
 OurAncestors/BeMiserable/3^oObject-Make-3^oSubject
 “they made our ancestors miserable”

By passivizing the previous example we have:

- (46) ?*patahasalinai_i bihiobi Ø_i-exana-tsi*
 OurAncestors/BeMiserable/3^oObject-Make-4^oSubject
 “our ancestors were made miserable”

Now, the introduction in (45) of a new participant, “we,” by way of the “concerning” preverb gives:

- (47) ?*patahasalinai_i bihiobi pa-ne_k-to-exana-Ø_j*
 OurAncestors/BeMiserable/Plural-1^oObject-Concerning-Make-3^oSubject
 “they made our ancestors miserable and it affects us”

with causee *patahasalinai*, “our ancestors,” demoted to indirect object position because of the saliency properties of the direct object, “we,” which allow it to remain in its own position. All mechanisms at work in (44)–(47) accord with what we already know. In particular, (47) is formally equivalent to (25). In passivizing such a construction we won’t get the canonical third person object passive, as described in (38)–(43): the structure in (47) obtains and the prominent third person participant, the causee, yields to the higher person participant, as in the attested example:

- (48) *bihiobi pa-ne_k-to-exana-tsi patahasalinai_i*
 BeMiserable/Plural-1^oObject-Make-4^oSubject/OurAncestors
 “our ancestors were made miserable and it affects us”

No causativization of a passive construction seems to occur.

9.

More than the grammatical use of a full verb *exana* is involved in the Sikuani causative if we assume that in this language *nouns are predicates* as much as verbs are. Concerning the full verb, we have seen the parallel between three-place verbs and *exana* as “turn into”:

- (49) a. *pebi tsema Ø-rahuta-Ø petiriwa*
 Man/Tobacco/3^oObject-Give-3^oSubject/Woman
 “the man gave tobacco to the woman”
 b. *pebi pewonotoxi tulukisi Ø-exana-Ø*
 Man/Teeth/Collar/3^oObject-Make-3^oSubject
 “the man made a collar out of the teeth”

In spite of a rather free order, ditransitive constructions like “give” tend to have the noun phrase referring to the transferred entity, the indirect object, in immediate

preverbal position (this is also true of “say,” *hai*, a ditransitive verb almost always occurring just after the reported direct discourse). If we consider that nouns are fully predicative, as in

- (50) a. **pebi-Ø**
 Man -3^o Subject
 “he is a man”
 b. **pebi-mü**
 Man -2^o Subject
 “you are a man”

then any noun phrase in argument position is in fact a subordinated predicate. The “transfer a conditions-of-existence set onto a recipient entity” gloss above should be understood in such a way that what we have in (49b) must be reinterpreted in the following terms: the closer noun phrase to the verb, *tulukisi*, “collar,” is the subordinate predicate indicating the conditions of existence to be transferred, in fact, “be a collar”; the other non-subject noun phrase, *pewonotoxi*, “teeth,” is the entity onto which the transfer is operated.¹⁰ *Tulukisi* must have a third person subject suffix that refers to the recipient entity and corefers with the main predicate object prefix (following Launey 1994), as in:

- (51) **pebi_i pewonotoxi_i tulukisi_i-Ø_j Ø_j-exana-Ø_i**
 Man/Teeth/BeACollar-3^o Subject/3^o Object-Make-3^o Subject
 “the man made a collar out of the teeth (lit.: . . . made the teeth be a collar)”

The recipient participant is indeed the direct object of the verb, as it is in “give”-type constructions, since with a non-third person equivalent construction we can find:

- (52) **tamatapihinüyo_i-mü_j ka_j-exana-tsi**
 MyElderBrother-2^o Subject/2^o Object-Make-4^o Subject
 “I consider you as my elder brother”

with an overt marking of coreferent affixes on both main predicate object position, *ka-*, and subordinate predicate subject position, *-mü*.¹¹ A closer gloss to this example would then be: “I make you be my elder brother.”

When the transferred conditions of existence are represented by a subordinate verbal predicate, the recipient – the causee – is, again, the object of the causative verb and the subject of the subordinated predicate.¹² Formally, nothing changes with respect to subordinate noun predicate constructions in the case of verbs belonging to the same sub-class than *bihio*, “be miserable.”

- (53) **bihiobi- $\boxed{\emptyset_j \ \emptyset_j}$ -exana- \emptyset_i**
 BeMiserable-3° Subject/3° Object-Make-3° Subject
 “he_i made him_j be_j miserable”

Evidence for assuming a subject suffix on **bihiobi** comes from the possibility of a construction like

- (54) **bihiobi-mü na-exana-me**
 BeMiserable-2° Subject/Reflexive-Make-2° Subject
 “you made yourself miserable”

where the occurrence of affix material between the two verbs is allowed by the fairly loose syntagmatic relation that links them together: notwithstanding the strict order, a particle can be inserted (a close reflection of what is possible within the sequence noun plus verb in (49)).

- (55) **bihiobi- \emptyset metha \emptyset -exana- \emptyset**
 BeMiserable-3° Subject/Maybe/3° Object-Make-3° Subject
 “maybe he made him miserable”

The other verbs behave in such a way that nothing can intervene between them and **exana**. All morphological stuff is rejected to both extremes of the complex word they form together. There is no room left for the subordinate verb subject suffix, neither in the middle – because of the tight link – nor at the end of the complex – because of the causer pronominal, but there can be or is room for an object prefix at the beginning. This strategy tantamounts to have the expression of the causee preempted by the object of the syntactically dominant verb. On an intransitive:

- (56) a. ***phirapha- $\boxed{\emptyset_j \ \emptyset_j}$ -exana- \emptyset_i** “he_i made him_j stumble..._j”
 ↓
 b. **\emptyset_j -phirapha-exana- \emptyset_i**

On a transitive:

- (57) a. * **\emptyset_k -konita- $\boxed{\emptyset_j \ \emptyset_j}$ -exana- \emptyset_i** “he_i made him_j whip_j it_k”
 ↓
 b. **\emptyset_j -konita-exana- \emptyset_i**

We have not yet addressed the case of full verb simple transitive occurrences of **exana**, i.e. “create.” Let’s give some attention to (7b).

- (58) **ponüyo_i patomara_j \emptyset_j -exana- \emptyset_i**
 ThatSmallOne/ThatVillage/3° Object-Make-3° Subject
 “that small one created that village”

Under the transfer perspective, existence itself is, here, the conditions-of-existence set that comes to be transferred to the direct object participant. I assume that a phonologically null existence predicate mediates between the noun phrase and the verb.

- (59) $\text{ponüyo}_i \text{ patomara}_j \text{ [exist]-}\boxed{\text{Ø}_j \text{ Ø}_j\text{-exana-Ø}_i$
 ThatSmallOne/ThatVillage/[Exist]-3°Subject/3°Object-Make-3°Subject
 “that small one_i made that village_j be_j”

The language has no existence verb, as said above. But it has a non-existence verb, **ahibi**. When put in causative form it gives an overt picture of what remains invisible in (59).

- (60) a. * $\text{Yawowanü}_i \text{ namuto}_j \text{ ahibi-}\boxed{\text{Ø}_j \text{ Ø}_j\text{-exana-biaba-Ø}_i$
 ↓
 $\text{Yawowanü}_i \text{ namuto}_j \text{ Ø}_j\text{-ahibi-exana-biaba-Ø}_i$
 Lizard/Pathway/3°Object-NotToExist-Make-Iterative-3°Subject
 “Lizard_i used to make the pathway_j disappear (lit.: ... make the pathway_j not to be_j)”

We have reached a unified account of all occurrences of the verb **exana**, consistent with the idea that causative morphemes are in some languages three-place predicates (Alsina 1992), and making Sikuaní akin to those languages in which “give”-type verbs are used as causatives.

10.

A causal relation between two events can be treated in various ways within one single language. Row a. in the following table schematizes what would be the totally explicit two clause expression of the events conjunction. The causal relation can surface through some **and** as a result linking device.

- (61)
- | | | | | | |
|----|----------|-------------------------------------|-----------------|-----------------------|------------------------------------|
| a. | [subject | [predicate(...)] _{cause} | <i>Relation</i> | [subject | [predicate(...)] _{effect} |
| | ↓ | ↓ | ↓ | ↓ | ↓ |
| b. | [subject | “chômeur” _{predicate(...)} | overt | chômeur _{NP} | predicate(...)] |
| | | | morphology | | |
| | ↓ | ↓ | ↓ | ↓ | ↓ |
| c. | subject | Ø | cause verb | non-subject arg. | predicate(...) |

The compact package of causatives is represented in rows b. and c. The cause clause subject – the causer – remains the subject. The cause clause predicate – the action by which things happen – disappears (or goes, via nominalization, to oblique status). The cause relation between the two events finds linguistic expression in a cause verb (or auxiliary, or affix). The effect clause subject has to find an argument position other than subject. Here obtain redistribution strategies like Comrie’s leapfrogwise demotion, or my propulsive chain. The effect clause predicate is now subordinated to the cause verb.

The particular organization of Sikuani causatives appealing to *exana* shows a striking parallel with non-causative uses of this same verb. I schematize this parallel in the following table.

(62)	instigator (causer)	recipient (causee)	transferred	transfer	
a. “create”	ponüyo little man	patomara that village	[existence]	exana make	
b. “turn into”	pebi man	pewonotoxi teeth	tulukisi collar	exana make	
c. “cause” on intransitive	pebi man	powayo little woman	bihiobi be miserable	exana make	
d. “cause” on intransitive	Namo Fox	petiriwa woman	hunae climb	exana make	
e. “cause” on transitive	taena my mother	penakueto child	konitsia whip	exana make	awiri dog

The present analysis shows that all occurrences of *exana* are in fact causative, given the intrinsically predicative status of nouns and the transfer hypothesis. Thus, the unified glosses for (62) would be, respectively:

(63)	instigator (causer)	transfer	recipient (causee)	transferred
a.	“that little man	made	that village	be”
b.	“the man	made	the teeth	be a collar”
c.	“the man	made	that little woman	be miserable”
d.	“Fox	made	the woman	climb”
e.	“my mother	made	the child	whip the dog”

Two remarks are in order. First, “the dog” in (62e) is certainly part of the transferred conditions of existence: it belongs to the round bracketed portion of sequence

[subject [predicate(...)]_{effect}

in (61). The reason why it doesn't appear in the proper column in (62) is because the table intends to follow word order as attested in the data used. Second, my account of (63a) has something semantically counterintuitive: the recipient should be viewed as pre-existent to the transfer process, which of course "that village" is not.

A unified account of "make" through its lexical and morpho-syntactic occurrences raises the issue of the causativization of nouns, since it rests on the assumption that what surfaces as arguments of the lexical "make" are in fact noun predicates, perfectly able, as such, to be causativized. Languages can causativize nouns. Some of them, such as Quechua, do it by different means for verbs and nouns. Others, such as Sikuani, Shipibo (Valenzuela, this volume) or Guaraní (Velazquez-Castillo, this volume), use identical or similar means for both classes. Furthermore, those languages which, like Shipibo, show a single morphological device for verbs and nouns, as in

- (64) a. **Sani-n-ra** **bake** *choron-ma-ke* [...]
 Sani-ERG-ASS child:ABS *jump*-CAUS-CMPL
 "Sani made the child jump three times"
- b. [...] **Iskon Niwe-n** **jawen yora** *yoshin-ma-[a]i* [...]
 Iskon Niwe-ERG POS3 body:ABS *become.spirit*-CAUS-INC¹³
 "Iskon Niwe made his body turn into spirit"

are additional support for the existence of a unitary "make" in Sikuani.¹⁴

Notes

1. A partial justification of this "4^o" person will be seen below.
2. The grammatical entity I call "indirect object" seems to exist in Swahili, with the same characteristics, but fails to be recognized as having any syntactic relation to the verb (Comrie 1976: 290; but see Givón 1997: 66).
3. The verb **konita** has a different form in each example, contrary to **phirapa** above. This is due to mood changes which are idiosyncratically induced by main verb roots and/or auxiliary roots. Most of the examples below show this kind of morphological process, that I am not segmenting.
4. Georgian and Swahili seem to show something similar to Sikuani (Comrie 1976).
5. Songhai has this same restriction (Comrie 1974: 10).
6. Plausibly a consequence of this is that an example like (13a) could be ambiguous (supposing that "dog" is a good agent for that verb) and mean also "my mother made the dog whip you," with a second person human patient outranking a third person non-human causee. But a tendency seems to exist which consists in having the causee in preverbal position and the patient in postverbal position – (37), and less neatly (15), are counterexamples

to this, respectively. We would then expect “dog” as causee in (13a) to show up before the verb. There is no straightforward confirmation of this possibility in my current data.

7. The optative is a “by-product” of the virtual mood, taken by **hanita** in this example.
8. The agent phrase can in fact occur, though rarely. I won’t go into that topic here, which probably reveals a diachronic change in progress.
9. This is an idiosyncratic property of a few verbs of this class. **Aphaetabi**, “to be lazy,” that we saw in examples (29), is also a member of the class but behaves in this respect as any other verb.
10. Of course, this noun phrase is also a subordinated predicate, “the one who/which is . . .”.
11. It would seem that the explicitation of the subject suffix on the subordinate noun predicate is not obligatory; see example (10b).
12. Alsina (1992:552) speaks of the causee as “a thematically composite argument.” I would phrase that the other way around and speak of “a syntactically composite participant.”
13. For the glosses and a complete version of these abbreviated examples, see Valenzuela (this volume). In spite of its gloss “become.spirit,” **yoshin** is labelled “noun root” in the author’s text. Cf., also, “[...] nouns [...] can take verbal affixation directly without requiring any formal derivation and thus function as predicates.”
14. As several participants in this volume, I am indebted to Masayoshi Shibatani for his in-depth remarks on the original version of this text, which allowed me to improve notably its contents and my understanding of the phenomena discussed.

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Causative constructions in Akawaio

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Introduction

This paper describes analytic causative constructions in Akawaio, a Cariban language of the Pemon subgroup spoken by approx. 9000 speakers in the Mazaruni district of Guyana.¹

Akawaio has no productive causative morphology. Causation is almost always expressed analytically. This makes Akawaio one of the few Cariban languages for which analytic causatives have been reported so far, the others being Makushi (Abbott 1991) and Wayana (Tavares, in progress). Since analytic causative constructions differ considerably across these three languages, it can be assumed that they are independent recent innovations. As recent innovations, the constructions discussed here are still relatively transparent both formally and semantically. There is no formal evidence of grammaticization (i.e. there are no phonological or syntactic properties that distinguish the causative uses of the various verbs functioning as matrix verbs in the causative construction as compared to their lexical uses), but there is some semantic bleaching. Like English, Akawaio has different verbs that may serve this function, and the specific semantics imparted by each of these verbs will take up a major portion of this paper.

The paper is organized as follows: Section 1 gives a general overview over the aspects of Akawaio grammar relevant to the analytic causatives; Section 2 introduces the theoretical focus of the paper; Section 3 describes the structure of Akawaio analytic causatives (with some reference to complementation in general); Section 4 discusses the data; Section 5 discusses one of the three causation verbs of Akawaio in more detail; and finally, Section 6 draws some general conclusions.

1. Aspects of Akawaio grammar

There are three aspects of Akawaio grammar which are immediately relevant to causative constructions: argument structure (subcategorization and person marking), adverb(ial)s, nominalizations, and causation verbs. Each of these will briefly be discussed (for a more detailed treatment of Cariban morphosyntax, cf. e.g. Gildea 1998).

1.1 Subcategorization and core arguments

All verbs in Akawaio are either intransitive or transitive, i.e. they may have maximally two core arguments. Any additional argument must be realized as an oblique; obliques are marked by a postposition and they are always optional (as indicated by the parenthesized material in [1c]):

- (1) a. *Tambik zaurogi'pi.*²
 tambik zaurogi -'pi
 tambik speak -PAST
 'Tambik spoke.'
- b. *Amöro ya urö'nogong wönö'pi.*
 amöro ya urö -'nogong wönö -'pi
 2SG ERG 1SG -PL hit -PAST
 'You hit us.'
- c. (*Igaredaydong ge) ireba'pi uya.*
 i- gareda -i -dong ge i- reba -'pi u- ya
 3- book -PSD -PL INST 3ABS- give -PAST 1- ERG
 'I gave him books.' (lit. 'I gifted him (with books)')

As (1–3) make clear, Akawaio is morphologically ergative.³ A is marked by the postposition *ya*, and S and O are morphologically unmarked. Absolutive nouns, as in (1a), or pronouns, as in (1b) always occur pre-verbally and there can be no intervening material between them and the verb. Absolutives can be realized as personal prefixes instead of free pronouns as in (1c). Ergatives are relatively free with respect to their position in the clause. They may occur before the verb phrase, i.e. preceding the absolutive, or post-verbally. No detailed work on basic word order in Akawaio has been done so far, but it seems the ergative is preferred in the post-verbal position (this is where it is typically produced in elicitation). Obliques may also occur before the verb phrase (preceding the ergative, if one is present), or post-verbally (preceding or following the ergative, if present). For a more detailed description of argument structure, cf. Stefanowitsch (1999), for person marking, cf. Mammalis (1999).

1.2 Adverbials

As far as we presently know, Akawaio has no adjectives. In those predicative constructions where English (and languages like it) use an adjective, Akawaio uses a noun followed by the postposition *pe*, as in (2a). However, PPs with *pe* (which I will refer to as *pe*-phrases) are not limited to this function. Akawaio also uses *pe*-phrases where English would use a predicative nominal, as in (2b), a resultative adverbial, as in (2c), or to add additional participants of various kinds to the clause, e.g. benefactives, as in (2d) (for want of a better English gloss I will gloss *pe* as ‘as’ in literal translations):

- (2) a. *Tambik eji a'nek pe.*
 tambik eji a'nek pe
 tambik COP heat OBL
 ‘Tambik is hot’ (Lit. ‘Tambik is as heat’)
- b. *Karoik eji amak pe.*
 karoik eji amak pe
 Karoik COP thief OBL
 ‘Karoik is a thief’ (Lit. ‘Karoik is as a thief’)
- c. *Karoik ya Yaimuji wönö'pī egek pe.*
 karoik ya yaimuji wönö -'pī egek pe
 karoik ERG yaimuji hit -PAST corpse OBL
 ‘Karoik beat Yaimuji unconscious’ (Lit. ‘K. beat Y. as a corpse’)
- d. *Tambik ya egi ögöinö'pī Karoik iwanok pe.*
 tambik ya egi ögöinö -'pī karoik iwanok pe
 Tambik ERG bread bake -PAST karoik possession OBL
 ‘Tambik baked bread for Karoik’
 (Lit. ‘T. baked bread as K.’s possession’)

1.3 Nominalization

As is typical of Cariban languages, Akawaio has a wide range of future, present, and past tense participant and event nominalizations. Some of these nominalizations are the diachronic source for the ergative system described in the preceding section. They provide the only means of forming subordinate clauses in the ergative system: nominalizations of various kinds can be added as obliques to transitive verbs in order to form complex sentences.⁴ Note that this means that there is strictly speaking no sentential complementation in Akawaio (see further Section 3.1 below). Consider Table 1, which shows the most important nominalization constructions in Akawaio.

Table 1. Akawaio nominalization constructions

Construction	Nominalization Type	English Gloss
VERB _{itr} - <i>ng</i>	EVENT	the VERB-ing
VERB _{itr/tr} - \emptyset	EVENT; (S/O-poss) (A-erg); present	(A's) VERB-ing (of O)
VERB _{tr} - <i>tok</i>	EVENT; O-poss (A-erg); future	(A's) future VERB-ing of O
VERB _{tr} - <i>ning</i>	A; (O-poss)	one who VERBs (O), VERB-er (of O)
VERB _{tr} - <i>tong</i>	A; O-poss; future	s.o. who will VERB O
<i>i</i> -VERB _{itr/tr} - <i>sak</i>	O/S; Past	one who (was) VERB-ed
<i>t(i)</i> -VERB _{itr/tr} - <i>seng</i>	O/S; present/habitual	one who is to (be) VERB(-ed)
<i>nĩ</i> -VERB _{tr} - <i>pĩ</i>	O; A-poss; past	one who was VERB-ed (by A)
<i>nĩ</i> -VERB _{tr} - <i>nĩ</i>	O; A-poss; habitual/imd. future	one that A is VERB-ing
<i>nĩ</i> -VERB _{tr} - <i>tong</i>	O; A-poss; future	one that A will VERB

The first column shows the respective Akawaio construction. The second column shows the nominalization type (event or participant), the possibility of expressing other participants (as possessors or ergative PPs, with parentheses marking optionality), and the tense.

Obviously, there are some recurring morphemes that can be separated and given individual meaning (they are glossed separately in the examples below), and, as already mentioned, some of the affixes shown here double as tense markers (a more detailed discussion of nominalizers can be found in Fleck 1999). For the purposes of this paper, the affixes or combinations of affixes will be thought of as constructions in a general sense (i.e. as recurring – and thus entrenched – form-meaning pairs, cf. Langacker 1987).

The constructions shown in Table 1 function syntactically as nouns (in a clause, they will be either one of the core arguments of a verb, or an oblique whose relation to the verb is indicated by a postposition). The issue of whether (some of) these nominalizations are in fact still nominalizations or whether they have been reanalyzed as verbs is hotly debated, but it is not particularly relevant here (see further e.g. Gildea 2000). I will use the term *nominalization* for these constructions.

1.4 Causation verbs

As mentioned in the introduction, Akawaio has no productive morphological causative. It has a non-productive causative suffix *-nĩgĩ*, which accounts for isolated intransitive-causative verb pairs, e.g. *erewdang* 'sit down' vs. *erewdanĩgĩ* 'sit s.o. down.' It also has a general transitivizer *-ba*, also not productive, which accounts for some intransitive-transitive pairs where the transitive verb may have a causative meaning, e.g. *bininö* 'walk' vs. *binimba* 'to walk s.o., to walk with s.o., to carry s.o.' (see Wiedrick 1999 for a list of verbs).

Productive causatives in Akawaio can only be formed with one of three causation verbs,⁵ all of which still function as lexical verbs in addition to their function in the causative construction: *kubi* ‘do’, *emaiga* ‘put into’, and *a’kwarga*, which has a range of meanings ranging from ‘shock’ over ‘pressure’ to ‘destroy’ (it will be glossed as ‘pressure’ here and below). Examples of their use as lexical verbs are given in (3a–c):

- (3) a. *tidrawazoi* *gubi iya*.
 t- drawazo -i kubi i- ya
 3R- work -PSD do 3- ERG
 ‘He is doing his work’
- b. *Tambik egi emaiga’pi waigara’pi yak*.
 tambik egi emaiga -’pi waigara’pi yak
 tambik bread put.in -PAST basket LOC
 ‘Tambik put bread in the basket’
- c. *ti’pay achi a’kwarga’pi iya*.
 t- ’pa -y achi a’kwarga -’pi i- ya
 PSN- hair -PSD hold force -PAST 3- ERG
 ‘She forced her hairpin open/out of shape’

As these examples show, all three verbs are transitive. Their precise meanings in their use as causation verbs are discussed in Section 3.1.

2. Aspects of causativity

A *causative construction* can be defined at the most general level as any construction encoding what Shibatani (1976: 1ff.) has called a causative situation: two events occurring in temporal succession, where the speaker believes that the second event would not have happened if the first event had not happened. Following well-established terminology, I will refer to the first event of such a situation as the *causing event*, its agent as the *causer*, and its patient as the *causee*. The second event is referred to as the *resulting event* (or simply the *result*). Its main participant is the causee; this participant may be the theme, patient, or agent of a one-participant event, or the agent of a two-participant event. The patient or theme of a two-participant event is the *affectee*.

There are many ways in which this type of situation may be encoded in a language (see e.g. Stefanowitsch 2001, Ch. 2 for a survey of such constructions in English); the one that concerns us here is the *analytic causative*.⁶ An analytic causative construction is a construction that overtly encodes causing and resulting event separately such that the morphosyntax encoding the effected event is in some way de-

pendent on the morphosyntax encoding the causing event; furthermore, the causing event is encoded by a general verb expressing primarily causation, and hence its precise nature is left unspecified (cf. e.g. Comrie 1989: 167; Kemmer and Verhagen 1994: 117 for similar definitions). As a paradigm example, consider the English *make*-causative, as in *I made Karoik kill Tambik*, or *I made Karoik dance*.

There is a special case of the causative situation, where the result is not an event but a state, as in *Karoik made Tambik happy*, *I made Karoik a killer*, or *I made Karoik a man*. Constructions encoding this type of situation are structurally identical with and semantically very similar to resultative constructions like *I banged the door shut* or *I painted the house green*, although unlike the latter, they leave the causing event unspecified (for a discussion of the resultative construction, cf. e.g. Goldberg 1995, Ch. 8, and the references cited therein). In this paper, I will refer to this type of construction as *resulting-state causative*, and to causative constructions encoding an event-result as *resulting-event causatives*.

Conceptually, there is a continuum between resulting states and resulting events. They share the same general characterization but differ in terms of the degree of dynamicity of the result, or, put differently, they differ with respect to the semantic transitivity of the result (as defined e.g. by Hopper and Thompson 1980; Rice 1987). The two situations described are extreme points on this continuum: the resulting-state causative encodes a situation where an agent acts on a patient with the result that the patient is in a particular state, the resulting-event causative encodes a situation where an agent acts on a patient with the result that the patient engages in some action directed at a third participant. There are several intermediate points on the continuum between these two extreme characterizations: the result may be a non-directed activity, or an involuntary process. This continuum is informally represented in Table 2 for the English causation verb *make*.

At the top of the continuum are resulting-event causatives with highly transitive event-results (*kill*), followed by resulting-event causatives with non-transitive event-results (*dance*). Next are resulting-state causatives where the result denotes an entity that is conceptualized as a participant in an event (*killer*, i.e. ‘someone involved in an event of killing’), followed by resulting-state causatives where the

Table 2. *The state–event continuum*

Construction Type	Example	Meaning of Construction
RESULTING EVENT	<i>Karoik made Tambik kill Gyarak</i>	X CAUSE Y DO Z TO Q
	<i>Karoik made Tambik dance</i>	X CAUSE Y DO Z
	<i>Karoik made Tambik a killer</i>	X CAUSE Y BECOME Z _{participant} / X CAUSE Y DO Z
	<i>Karoik made Tambik a man</i>	X CAUSE Y BECOME Z _{person}
RESULTING STATE	<i>Karoik made Tambik sad</i>	X CAUSE Y BE/BECOME Z _{property}

result denotes a type of entity that is not conceptualized as participating in any particular event (*man*). My claim is that the former type of resulting-state causative is closer to resulting-event causatives because although the result is a state ('being a killer'), this state is conceptualized against the background of an event ('killing someone').

Note that not all causation verbs can encode situations along the entire continuum. English *make* can occur in all three: (i) the resulting-state causative (or the resultative construction) [SUBJ *make* OBJ OBL_{adj}], (ii) the resulting-object construction [SUBJ *make* OBJ OBL_{NP}], and (iii) the resulting-event causative [SUBJ *make* OBJ VP]. *Force*, on the other hand, only encodes the resulting-event end of the continuum: *I forced Karoik to kill Tambik*, but not **I forced Karoik a killer/man* or **I forced Karoik sad*. It seems that there is a correlation between the dynamicity (or transitivity) of the causation verb and the dynamicity of the result: highly dynamic causation verbs are restricted to encoding situations with highly dynamic results (i.e. the resulting-event end of the continuum), while more abstract and general (and therefore less dynamic) causation verbs encode the entire range of situation types, and hence the entire continuum. This correlation will be demonstrated and justified in detail on the basis of the Akawaio data below.

3. Akawaio causatives: General overview

There are two main parameters which I consider relevant to the description of analytic causatives, both separately and in terms of their interaction: (i) the semantics of the causation verb (i.e. the verb encoding the causing event) in a given construction type, which is relevant in terms of the precise meaning it has in a causative construction (which will typically be richer than 'X caused Y to do Z'), and in terms of the degree to which this meaning is motivated by the lexical source of the verb; (ii) the properties of the morphosyntax used to encode the resulting event. The issue here is how the resulting event is encoded in general, and how it is syntactically and semantically related to the caused event, as well as how the participants of the resulting event (the causee and, if present, the patient, or affectee) are encoded (e.g. which of them are or can be overtly expressed, and with what morphosyntax).

3.1 The syntax of Akawaio causatives

Causative constructions in Akawaio have one of three syntactic patterns, which I will refer to as *causee absolutive*, *result absolutive*, and *dummy absolutive*, based on which participant is encoded as the absolutive of the causation verb. This section

gives a basic overview over their general structural properties, which will then be referred to again in more detail in the main body of this paper.

As mentioned in Section 1.3 above, Akawaio uses nominalizations standing in an oblique relation to the matrix verb where a language like English uses sentential complements, thus equivalents of sentences with what Givón (1993) calls ‘perception-cognition-utterance verbs,’ like *I saw Karoik kill Tambik*, *I know that Karoik killed Tambik* or *I ordered Karoik to kill Tambik*, are all expressed by the same structures as causative sentences (this will be pointed out in the appropriate places, where I will give examples with such verbs which are structurally parallel to the causative examples discussed). A detailed description of such sentence types has not been undertaken so far, but it seems that any restrictions on which nominalizers can encode the ‘sentential’ complements of which matrix verbs are purely semantic (as in the case of the causation verbs, cf. Section 4 below).

i. The causee absolutive. In the causee absolutive, the causer is encoded as the ergative of the causation verb, the causee as the absolutive of the causation verb, and the result as an oblique marked by the postposition *pe*. The result may either be a simple noun, denoting a state or a person, as in (4a), or a nominalized clause, which may have its own arguments, as in (4b):⁷

- (4) a. <causer causee CAUSE result>
 ERG ABS VERB_{caus} OBL_{noun}
- Karak ya tambik kubĩ'pĩ warawok pe.*
 karak ya tambik kubĩ -'pĩ warawok pe
 karak ERG tambik.ABS do -PAST man OBL
 ‘Karak made Tambik a man’ (Lit. ‘Karak did Tambik a man’)
- b. <causer causee CAUSE result>
 ERG ABS VERB_{caus} OBL_{nominalization}
- Urö ya Karoik kubĩ'pĩ Tambik wödong be.*
 urö ya karoik kubĩ -'pĩ tambik wö -tong pe
 I ERG karoik.ABS do -PAST tambik.O hit -FUT OBL
 ‘I made Karoik kill Tambik’ (Lit. ‘I did Karoik as one who will kill Tambik’)

Note that the causee is encoded twice in this pattern: once as the absolutive of the causation verb, and once as the referent of the result-nominalization (or one of its arguments). Note also that the causee absolutive pattern can occur with constructions on all points of the state–event continuum, since the result-oblique can be a noun (encoding states and entities), or a nominalization (encoding participants or events). In the case of the latter, this pattern can occur with all nominalizations shown in Table 1 except [VERB-*ng*] and [VERB-Ø].

The causee absolutive pattern is also possible with perception verbs, cognition verbs, and utterance verbs; the interpretation of the semantic relation between the verb and the oblique depends on whether the oblique is a noun or a nominalization (and in the case of the latter, on the type of nominalization), and on the specific verb used. In the case of a simple noun in the oblique slot, for perception and cognition verbs the interpretation is comparable to that of a *that*-clause or a *to be NP* complement in English, e.g. *Karak ya tambik ene'pī warawok pe* (karak ERG tambik.ABS see-PAST man OBL) 'Karak saw that Tambik was a man' (a literal translation would be 'Karak saw Tambik as a man'); or *Karak ya tambik i'tu'pī warawok pe* (karak ERG tambik.ABS know-PAST man OBL) 'Karak knew/realized that Tambik was a man' or 'Karak recognized Tambik to be a man' (a literal translation would be 'Karak knew Tambik as a man'). For utterance verbs, the interpretation is comparable to a manner adverbial in English, for example *Karak ya tambik auro'ka'pī warawok pe* (karak ERG tambik.ABS talk.to -PAST man OBL) 'Karak talked to Tambik like a man' (e.g. in a man's voice, using speech patterns typical for a man, etc.). If the oblique is, for example, a future nominalization, the interpretation for all three types of verbs is something like a *that*-clause: *Urö ya Karoik ene'pī Tambik wödong pe* (1 ERG karoik.ABS see -PAST tambik.O hit -FUT OBL) 'I saw that Karoik would kill Tambik'; *Urö ya Karoik i'tu'pī Tambik wödong pe* (1 ERG karoik.ABS know -PAST tambik.O hit -FUT OBL) 'I knew that Karoik would kill Tambik'; and *Urö ya Karoik auro'ka'pī Tambik wödong pe* (1 ERG karoik.ABS talk.to -PAST tambik.O hit -FUT OBL) 'I told Karoik that he should kill Tambik/to kill Tambik.' The literal translation for these expressions is 'I saw/knew/talked.to Karoik as one who will kill Tambik.'

ii. *The result absolutive.* In the result absolutive, the causer is again encoded by the ergative, and the nominalized resulting event with its participants is encoded as the absolutive, as shown in (5):

(5)	<causer	result>		CAUSE
	ERG	ABS _{nominalization}		VERB _{caus}
	<i>Urö ya</i>	<i>waigara'pī gang dyö</i>		<i>gubi'pī.</i>
	urö ya	waigara'pī gang i- dö -Ø	kubi -'pī	
	1 ERG	basket for 3s- go -NOMI	do -PAST	
		'I made him go for the basket' (Lit. 'I did [his going for the basket]')		

Note that the causee is no longer an argument of the causation verb. Instead, the resulting event as a whole now fills the absolutive position. It is unclear whether this has any direct semantic consequences. One might expect that the fact that the causee is not an argument of the causation verb iconically reflects a more mediated type of causation than the causee absolutive (S. Gildea, p.c.). However, no such differences can be elicited from the consultant. Note that the result absolutive occurs

exclusively with the nominalizations [VERB-*ng*] and [VERB- \emptyset], which makes a direct comparison with the causee absolutive impossible.

The result absolutive can occur with verbs of perception and cognition, but not with utterance verbs. The reason for this becomes clear from the following examples with the [VERB- \emptyset] nominalization. Perception and cognition verbs yield a very straightforward interpretation comparable to bare infinitive complements or *that*-clauses in English, e.g. *Urö ya waigara'pī gang dyö ene'pī* (1 ERG basket for 3s-go-NOMI see -PAST) 'I saw him go for the basket'; and *Urö ya waigara'pī gang dyö i'tu'pī* (1 ERG basket for 3s-go-NOMI know -PAST) 'I know that he went for the basket.' As the glosses and the literal translation for such examples, 'I saw/knew his going for the basket', show, the action is simply the absolutive argument of these verbs, and thus naturally receives the interpretation 'event seen' or 'event known.' Utterance verbs are obviously impossible in this syntactic pattern, because they require the interlocutor to occupy the absolutive slot. Thus, ^{??}*Urö ya waigara'pī gang dyö auro'ka'pī* (1 ERG basket for 3s-go-NOMI do -PAST) means 'I talked to his going for the basket,' which is ruled out by its semantic oddity.

iii. *The dummy absolutive.* In the dummy absolutive, the causer is again encoded as the ergative of the causation verb. The resulting event with its arguments is encoded as an oblique. There is a dummy absolutive prefix on the causation verb. This prefix is always third person, thus it does not refer to any of the participants in the causing or resulting event:

(6)	<causer	CAUSE		result
	ERG	ABS Δ -VERB _{caus}		OBL _{nominalization}
	<i>Urö ya</i>	<i>igubī'pī</i>		<u><i>Karoik ya Tambik wödok</i></u> <i>pe.</i>
	urö ya	i- kubī -'pī	karoik ya tambik wö -dok	be
	1 ERG	ABS Δ -put	-PAST karoik A tambik hit	-NOMI OBL
	'I made Karoik kill Tambik' (Lit. 'I did it _i [Tambik's future killing by Karoik] _i ')			

This prefix is best thought of as standing in for the oblique nominalization (hence the term 'dummy').

This pattern can occur exclusively with the [VERB-*tok*] nominalization. Since this is an event nominalization, the pattern only encodes the resulting-event end of the state–event continuum. The question is, again, whether the morphosyntactic form of the construction has immediate semantic consequences. Since the [VERB-*tok*] nominalization can also occur in the causee absolutive pattern, the two patterns can be directly compared. We might expect a difference in directness between them comparable to that between English 'I caused Karoik to kill Tambik' and 'I caused it that Karoik killed Tambik.' However, such a difference could not be elicited.

The dummy absolutive pattern is not possible with perception or cognition verbs: **Urö ya ene'pī Karoik ya Tambik wödok pe* (1 ERG ABS_Δ- see -PAST karoik A tambik hit -NOMI OBL), which would be literally translated as 'I saw it_i [T's future killing by K]_i' cannot be used to mean 'I saw Karoik kill Tambik'; likewise, **Urö ya i'tu'pī Karoik ya Tambik wödok pe* (1 ERG ABS_Δ- know -PAST karoik A tambik hit -NOMI OBL), which would be literally translated as 'I knew it_i [Tambik's future killing by Karoik]_i', cannot mean 'I knew Karoik would kill Tambik.' Instead, such examples are strongly and consistently rejected by the consultant. If an interpretation is forced, it is something like 'I made Karoik kill Tambik by seeing/knowing him', but even accepting the oddness of this interpretation, such examples are rejected. This is evidence for S. Gildea's (p.c.) hypothesis that the combination of [VERB-*tok*] + *pe* has grammaticized to become a purpose complementizer meaning something like 'in order to'. Clearly, this meaning is compatible with directive utterance verbs, thus *Urö ya auro'ka'pī Karoik ya Tambik wödok pe* (1 ERG ABS_Δ-talk.to-PAST karoik A tambik hit-NOMI OBL) 'I told Karoik to kill Tambik' is unproblematic.

3.2 The semantics of Akawaio causation verbs

This section provides a characterization of the semantics of *kubī*, *emaiga*, and *a'kwarga* in their use as causation verbs. These characterizations were arrived at by first constructing minimal pairs of sentences differing only in the choice of causation verb and asking for descriptions of what each sentence means, what situation it may be uttered in, etc., and then abstracting away from the specifics of these situations to arrive at something like an invariant core meaning. In addition to their specific semantics, each verb is characterized in terms of the general parameters animacy of the causer and causee, likelihood of success of the causing event (i.e. strength of the factive entailment or implicature), and dynamicity (or what I will call 'high causativity').

In keeping with the idea of the state–event continuum, I will assume that results are high in causativity if (i) there is great resistance on the part of the causee, (ii) this resistance is overcome by forceful direct contact between causer and causee, (iii) there is a subsequent active involvement on the part of the causee in the result, and (iv) the result (or the whole event) involves physical or emotional damage to the causee. In other words, in a typical case of causation there is a highly transitive causing event whose transitivity carries across into a highly transitive resulting event.

i. kubī. The verb *kubī* 'do' is semantically fairly abstract, and also the least restricted of the three verbs in terms of the animacy of causer and causee. It generally focuses on the result rather than on the change required to reach the result. In the case of voluntary actions it has a sense of the causer 'selecting' or 'singling out' the

causee from a group of potential participants to do something. The result of the causing event is then the state of ‘being selected.’ Although there is a factive implicature pertaining to the action for which the causee has been selected, this can be easily canceled. In the case of resulting-state causative (esp. with emotional states), *kubī* seems to have a factive entailment (which cannot be canceled). Often there is a sense of *maintaining* a state, rather than bringing it about, and there is a sense that the effected state is permanent. *Kubī* is thus not very high in causativity. The consultant typically uses the English causation verb *make* to translate sentences containing *kubī*, although *select* is also sometimes used.

ii. *emaiga*. The verb *emaiga* ‘put in’ focuses on the actual change of state or the action leading to the result. It suggests that the causing event consists of a long preparation phase, during which the causer continually coaxes the causee, or teaches or trains the causee to bring about the result. Both causer and causee must be animate; where inanimate nouns are used, this results in a personification interpretation of both entities. The factive properties of *emaiga* are much like those of *kubī*, although they seem to be somewhat stronger. *Emaiga* is higher in causativity than *kubī*, since there is not just an act of selection on the part of the causer, but more active involvement on the part of the causee in the preparation phase. Although *emaiga* implies that the causee does not necessarily want the result to happen, he or she is convinced into bringing it about rather than forced to, and there is no sense that the result affects him or her negatively. The consultant uses English expressions like *get s.o. to do sth.*, *coax s.o. into doing sth.*, and *brainwash s.o. into doing sth.* to translate sentences containing *emaiga*.

iii. *a'kwarga*. The verb *a'kwarga* ‘force’ is the most specific and the most causative of the three causation verbs. It always implies resistance on the part of the causee, a high degree of force (physical force or a psychologically forceful experience) in overcoming this resistance, and, crucially, negative effects (typically in the form of psychological or emotional damage) on the causee. Again, both causer and causee must be animate. On the basis of information presently available, it seems that *a'kwarga* has a factive entailment. The consultant typically uses the English verb *force* in translating sentences containing *a'kwarga*. *A'kwarga* behaves differently than the other two causation verbs, and will be discussed in more detail in Section 5.

4. Akawaio causatives and the state–event continuum

In English, there is an expected correlation between the type of result and the form by which it is encoded: temporary resultant states are encoded by adjectives, more permanent resultant states are encoded by nouns, and resultant actions are encoded by verbs. When certain causation verbs cannot encode certain parts of the

state–event continuum, this could theoretically be explained by positing syntactic restrictions. For example, it could be argued that *force* cannot encode the resulting–state end of the continuum because it does not allow an adjective or a noun as a complement besides the direct object, as in **Karoik forced Tambik sad*, **Karoik forced Tambik a man*. This is, of course, not a claim I wish to make, but it is a possible line of argumentation for a language like English, which allows different syntactic types of complements. In Akawaio, such a line of argumentation is not even theoretically possible, since all resultant states or actions are encoded by what is syntactically noun phrase. Thus, any restrictions on acceptability *must* be stated in purely semantic terms. I will deal with each semantic type in turn.

4.1 X CAUSE Y BE Z_{STATE}

This semantic type can only be encoded with the causee absolutive (Section 3.1, i). As examples (7a–c) show, both *kubĩ* and *emaiga* can occur in this construction if the resulting state is encoded by the structure [[NP_{STATE}] pe], but *a'kwarga* cannot (here and in all following examples, the part of the construction encoding the result will be underlined for expository ease):

- (7) a. Pogoi be agubĩ'pĩ uya.
 Pogoi pe a- kubĩ -'pĩ u- ya
 sadness OBL 2ABS- do -PAST 1- ERG
 'I made you permanently sad' (Lit: 'I did you as sadness')
- b. Pogoi be ayemaiga'pĩ uya.
 pogoi pe a- emaiga -'pĩ u- ya
 sadness OBL 2ABS- put.in -PAST 1- ERG
 'I made you sad' (Lit: 'I put you as sadness')
- c. *Pogoi be aya'kwarga'pĩ uya.
 pogoi pe a- a'kwarga -'pĩ u- ya
 sadness OBL 2ABS- pressure -PAST 1- ERG
 (Lit. 'I forced you as sadness')

The closest acceptable paraphrase of (7c) is one where the *pe*-phrase encoding the resultant state functions as the complement of the nominalized copula *eji* 'be,' which in turn functions as the complement of *a'kwarga*, as in the following example:

- (7) d. Pogoi be aye'tok pe aya'kwarga'pĩ uya.
 pogoi pe a- eji -tok pe a- a'kwarga -'pĩ u- ya
 sadness OBL 2S- COP -NOMI OBL 2ABS- pressure -PAST 1- ERG
 'I forced you to be sad' (Lit: 'I forced you as [your future being as sadness])

Note that the difference between (7c) and (7d) is not a syntactic one, as the English glosses might suggest. The English counterpart of (7c) can be argued to be ungrammatical because *force* requires a *to*-clause as a complement, as in (7d). However, as shown by the literal glosses, the two examples have exactly the same syntactic structure in Akawaio: both take causer and causee as their ergative and absolutive arguments, and in both examples the result is a noun phrase embedded in a *pe*-phrase. Since the complement in (7d) has the same syntactic form as the disallowed one in (7c), the difference in acceptability between the two must be accounted for semantically. Since the same difference is relevant for the semantic types discussed in the next subsection, I will return to this issue after discussing these data.

Suffice it here to comment briefly on the semantic differences between the acceptable examples, i.e. (7a, b, d). Example (7a) expresses a situation where the resulting state is a permanent one, or where the causer keeps doing something that will maintain the resulting state; another example would be *Panak pe agubi'pi uya* (strength ADV 2ABS-do 1-ERG) 'I kept you strong'. Example (7b), on the other hand, focuses on the causing event, evoking a situation where the causer has to expend more energy in order to bring about the resulting event; another example would be *Panak pe ayemaiga'pi uya* (strength OBL 2ABS-put.in 1-ERG) 'I made you strong', which implies that the causer exercised with the causee for a considerable length of time in order to make him/her strong. Example (7d), finally, implies that the causer forced the causee to behave or act like a sad person, and focuses on the fact that the causee initially resists this type of behavior. Thus, (7d) does not actually encode the semantic type $X_{\text{CAUSE}} Y_{\text{BE}} Z_{\text{STATE}}$: the nominalized copula turns the complement into an event, and the semantic type is thus $X_{\text{CAUSE}} Y_{\text{ACT}} Z_{\text{STATE}}$, which is just a specific instance of $X_{\text{CAUSE}} Y_{\text{DO}} Z_{\text{(TO Q)}}$, which will be discussed in Section 4.2.3.

The adversative nature of *a'kwarga* restricts its use with positive resulting states, resulting in an oddness of sentences like *??Panak pe aye'tok pe agubi'pi uya* (strength ADV 2S-COP-NOMI OBL 2ABS-do 1-ERG) 'I forced you to behave/act strong'.

4.2 $X_{\text{CAUSE}} Y_{\text{BE}} Z_{\text{PERSON}}$

The case of a resulting state expressed by a complement of the form $[[N_{\text{PERSON}}] pe]$ is much more complex than the case discussed in the preceding section, since a distinction needs to be made between morphologically simple nouns and nouns derived from verb roots by one of the participant nominalizers shown in Table 1 above. Semantically, this is the distinction between referents that can be conceptualized independently of any particular event (like *man* or *chief*), and referents that can only be conceptualized as participants in some event, and that thus auto-

matically evoke that event (like *killer*). Note, that both semantic types can only be encoded by the causee absolutive.

4.2.1 Event-independent referents

For simple nouns (i.e. those encoding event-independent referents), the behavior of the three verbs is very similar to the case of nouns encoding states:

- (8) a. *Karak ya warawok pe Tambik kubi'pi.*
 karak ya warawok pe tambik kubi -'pi
 karak ERG man OBL tambik do -PAST
 'Karak chose/mistook Tambik to be a man'
- b. *Karak ya warawok pe Tambik emaiga'pi.*
 karak ya warawok pe tambik emaiga -'pi
 karak ERG man OBL tambik put.in -PAST
 'Karak made Tambik (into) a man'
- c. ^{??}*Karak ya warawok pe Tambik a'kwarga'pi.*
 karak ya warawok pe tambik a'kwarga -'pi
 karak ERG man OBL tambik pressure -PAST
 (Intended: 'Karak forced Tambik to be a man')
- d. *Karakya warawok pe ye'tok pe Tambik a'kwarga'pi.*
 karak ya warawok pe i- eji -tok pe tambik a'kwarga -'pi
 karak ERG man OBL 3s- be -NOMI OBL tambik pressure -PAST
 'Karak forced Tambik to be a man'

Here, the restriction on *a'kwarga* is the same as in the case of nouns encoding states, although the restrictions seem to be less strong.⁸

The semantics of the three verbs in this variant of the construction are interesting. *Kubi* has the meaning 'choose' or 'mistake for' here. At first, the second meaning seems unexpected. However, it is very much in line with the general meaning of *kubi*, as characterized in Section 3.1: selecting someone to be something is in a sense a categorization process (recall that *kubi* does not necessarily imply that the causer acts on the basis of his or her selection). The sense of 'mistake for' comes from the possibility of miscategorizing. The English verb *take* has the same ambiguity in certain contexts: *I took her to be my wife* could mean 'I chose her to be my wife', but it could also mean 'I erroneously assumed she was my wife'.

Example (8b), using *emaiga*, immediately evoked from my consultant the idea of a woman sleeping with a young man, thus making him a 'real' man. It can, however, also refer to the interpretation expected from the semantics of *emaiga*, where Karak spends a long time raising Tambik, teaching him all the skills he needs to know to function as a grown-up man. *Emaiga* is certainly the most unmarked verb in this semantic variant of the construction. *A'kwarga* in (8d) has the interpretation

that Karak physically forced Tambik to *act* like a man (e.g. in a play). The implication that Tambik is only acting comes from the fact that one cannot force someone to actually be a man, since ‘being a man’ is a state that require preparation, a certain age (or maturity), etc.

4.2.2 Event-dependent participants

I will begin with O-nominalizers, since they behave most like simple nouns. The three O-nominalizers in Table 1 can be seen as instantiations of a single construction: [nĭ-VERB-TENSE] ‘someone who was/is/will be VERB-ed’. All three of them are obligatorily possessed by the A (*Tambik* in [9a], first person singular, realized as zero in [9b]):

- (9) a. *Karoik emaiga’pĭ uya Tambik nĭwönönĭ* be.
 karoik emaiga -’pĭ u- ya tambik nĭ- wönö -nĭ pe
 Karoik put.in -PAST 1- ERG Tambik O.NOMI- hit -PRES OBL
 ‘I made Karoik the one that Tambik will hit’
- b. *Karoik kubĭ’pĭ uya nĭwönönĭ* be.
 karoik kubĭ -’pĭ u- ya ø- nĭ- wönö -nĭ pe
 karoik do -PAST 1- ERG 1.POSS- O.NOMI -hit -PRES OBL
 ‘I made Karoik my victim’ (i.e. ‘the one I will hit’)

Both *kubĭ* and *emaiga* can take this nominalization in all three tenses, but *a’kwarga* can not occur with any variant of it:

- (10) a. **Karoik a’kwarga’pĭ uya nĭwönönĭ* be.
 karoik a’kwarga -’pĭ u- ya ø- nĭ- wönö -nĭ pe
 Karoik pressure -PAST 1- ERG 1.POSS- O.NOMI- hit -PRES OBL
 (Intended: ‘I forced Karoik to be my victim’)
- b. **Karoik a’kwargapĭ uya nĭwönö’pĭ* be.
 karoik a’kwarga -’pĭ u- ya ø- nĭ- wönö -’pĭ pe
 Karoik pressure -PAST 1- ERG 1.POSS- O.NOMI- hit -PAST OBL
 (Intended: ‘I forced Karoik to be my victim’)
- c. **Karoik a’kwarga’pĭ uya nĭwödong* be.
 karoik a’kwarga -’pĭ u- ya ø- nĭ- wö -tong pe
 karoik pressure -PAST 1- ERG 1.POSS- O.NOMI- hit -FUT OBL
 (Intended: ‘I forced Karoik to be my victim’)

It seems, then, that the O-nominalizations pattern just like simple nouns.

Next, I will discuss the A-nominalizers, [VERB-*tong*] ‘someone who will VERB (O), and [VERB-*ning*] ‘someone who VERBs (O), VERB-er (of O)’. The first of these again shows the pattern already familiar:

- (11) a. *Karoik kubĩ'pĩ uya Tambik wödong be.*
 karoik kubĩ -'pĩ u- ya tambik wö -tong pe
 karoik do -PAST 1- ERG tambik hit -FUT OBL
 'I selected Karoik to be the one to kill Tambik'
- b. *Karoik emaiga'pĩ uya Tambik wödong be.*
 karoik emaiga -'pĩ u- ya tambik wö -tong pe
 karoik put.in -PAST 1- ERG tambik hit -FUT OBL
 'I made Karoik be the one to kill Tambik'
- c. **Karoik a'kwarga'pĩ uya Tambik wödong be.*
 karoik a'kwarga -'pĩ u- ya tambik wö -tong pe
 karoik pressure -PAST 1- ERG tambik hit -FUT OBL
 (Intended: 'I forced Karoik to be the one to kill Tambik')

Turning to the semantics of these examples, in (11a) the connotation is that I simply select Karoik at random with no implication that I assess Karoik's ability to kill or even teach him how to do so. In (11b) there is a sense that I trained Karoik as a killer, teaching him how to use weapons, etc. As (11c) shows, this nominalization is not acceptable as a direct complement to *a'kwarga*, but the sentence would be acceptable with a nominalized copula taking the nominalization as a complement; as expected, the interpretation is then one of physical force on the part of the causer:

- (11) d. *Karoik a'kwarga'pĩ uya Tambik wödong be ye'tok pe.*
 karoik a'kwarga -'pĩ u- ya tambik wö -tong pe i- eji -tok pe
 karoik pressure -PAST 1- A tambik hit -FUT OBL 3S- be -NOMI OBL
 'I forced Karoik to be the one to kill Tambik'

Now consider (12a–c):

- (12) a. *Tambik ya Karoik wöning be urö gubĩ'pĩ.*
 tambik ya karoik wö -ning pe urö kubĩ -'pĩ
 tambik ERG karoik hit -NOMI OBL 1SG do -PAST
 'Tambik put me aside/selected me to be the killer of Karoik'
- b. *Tambik ya Karoik wöning be urö emaiga'pĩ.*
 tambik ya karoik wö -ning pe urö emaiga -'pĩ
 tambik ERG karoik hit -NOMI OBL 1SG put.in -PAST
 'Tambik made me (into) the killer of Karoik'
- c. *Tambik ya Karoik wöning be urö a'kwarga'pĩ.*
 tambik ya karoik wö -ning pe urö a'kwarga -'pĩ
 Tambik ERG Karoik hit -NOMI OBL 1SG pressure -PAST
 'Tambik forced me to be the killer of Karoik'

This nominalization works with all three verbs (with the expected semantic distinctions between them). This is unexpected in light of the pattern which emerged in the preceding subsections. It is also unexpected in light of the close semantic similarity between (11a–c) and (12a–c).

At this point, we need to come back to the question of how to explain the constraint on *a'kwarga* in the first place. Recall that it can be freely used with event nominalizations (cf. also next subsection). On the other hand, it can never be used with nouns denoting states or event-independent participants, and it seems that in general it cannot be used with participant nominalizations. Were it not for (12c), we could phrase this constraint in just these terms. As it stands, we have to look for an explanation for the difference in acceptability between (11c) and (12c) elsewhere. Since the morphosyntactic structure of both examples is the same (something like [ERG_{causer} ABS_{causee} *a'kwarga* [[O_{affectee} NOMI] *pe*]]], the constraint cannot be a purely formal one. Instead, consider the difference in semantics: examples (11a–c) encode a situation where the causee is chosen/made/forced to be the one who *will* kill the affectee; the result is his or her concession to do so in the future, but no killing has actually taken place at this point. Examples (12a–c), in contrast, encode a situation where the causee is chosen/made/forced to be the affectee's actual killer, which he or she will only become through the event of killing. In other words, although both sets of examples evoke an event of killing via the nominalization encoding an event-dependent participant, only the second set of examples other words, the semantics of (12c) encompasses both X CAUSE Y BECOME Z_{AGT} and X CAUSE Y DO Z, while (11c) can only have the first reading. The constraint on *a'kwarga* can then be stated in terms of semantics: *a'kwarga* can only occur where the result is an event, regardless of whether this event is directly encoded as an event nominalization or whether it is entailed by a participant nominalization. It can not occur with participant nominalization that does not entail that the event evoked actually is taking or has already taken place.

Finally, let us look at the two ABS-nominalizations, beginning with [*t*-VERB-seng] 'one who is to VERB_{intr}/one who is to be VERB_{trans}-ed'. For intransitive verbs (i.e., where S is nominalized), all three verbs can occur with this nominalization, including *a'kwarga* as in (13c):

- (13) a. *Tambik ya Karak kubī'pī tīmanunzeng be.*
 tambik ya karak kubī -'pī t- manun -seng pe
 tambik ERG Karak do -PAST PTCP- dance -ABS.NOMI OBL
 'Tambik made Karak dance'
- b. *Tambik ya Karak emaiḡa'pī tīmanunzeng be.*
 tambik ya karak emaiḡa -'pī t- manun -seng pe
 tambik ERG Karak put.in -PAST PTCP- dance -ABS.NOMI OBL
 'Tambik got Karak to dance'

- c. *Tambik ya Karak a'kwarga'pī tīmanunzeng be.*
 tambik ya karak a'kwarga -'pī t- manun -seng pe
 tambik ERG Karak pressure -PAST PTCP- dance -ABS.NOMI OBL
 'Tambik forced Karak to dance'

For transitive verbs, *emaiga* and *kubī* can occur with this nominalization, but *a'kwarga* cannot:

- (14) a. *Karoik kubī'pī uya tīwözeng be.*
 karoik kubī -'pī u- ya t- wö -seng pe
 karoik do -PAST 1- ERG PTCP- hit -ABS.NOMI OBL
 'I made Karoik the one to be hit'
- b. *Karoik emaiga'pī uya tīwözeng be.*
 karoik emaiga -'pī u- ya t- wö -seng pe
 karoik put.in -PAST 1- ERG PTCP- hit -ABS.NOMI OBL
 'I made Karoik the one to be hit'
- c. ^{??}*Karoik a'kwarga'pī uya tīwözeng be.*
 karoik a'kwarga -'pī u- ya t- wö -seng pe
 karoik pressure -PAST 1- ERG PTCP- hit -ABS.NOMI OBL
 'I forced Karoik to be the one to be hit'

The other absolutive nominalization, [*i*-VERB-*sak*] 'one who VERB_{intr}-ed/was VERB_{trans}-ed', behaves exactly like [*t*-VERB-*seng*], i.e. it can also occur with *kubī* and *emaiga* but not with *a'kwarga*:

- (15) a. *Karoik kubī'pī uya iwözak pe.*
 karoik kubī -'pī u- ya i- wö -sak pe
 karoik do -PAST 1- ERG 3- hit -PAST OBL
 'I selected Karoik to be like/play the one that was killed'
- b. *Karoik emaiga'pī uya iwözak pe.*
 karoik emaiga -'pī u- ya i- wö -sak pe
 karoik put.in -PAST 1- ERG 3- hit- NOMI OBL
 'I made Karoik like someone who was killed'
- c. ^{??}*Karoik a'kwarga'pī uya iwözak pe.*
 karoik a'kwarga -'pī u- ya i- wö -sak pe
 karoik force -PAST 1- ERG 3- hit -NOMI OBL
 (Intended: 'I forced Karoik to be the one who was killed')
- d. *Karoik a'kwargapī uya iwözak pe y-e'tok pe.*
 karoik a'kwarga -'pī u- ya i- wö -sak pe i- eji-tok pe
 karoik force -PAST 1- ERG 3- hit -NOMI OBL 3- COP-NOMI OBL
 'I forced Karoik to be like the one who was killed'

How does the proposed characterization of the restrictions on *a'kwarga* fare in light of these examples? Again, looking at all examples in this subsection, there are two clear patterns: patient-nominalizations and any kind of past-tense participant nominalizations can not occur with *a'kwarga*. Agent nominalizations sometimes can. The first case was explained by arguing that the nominalization in question strongly evokes the event with respect to which the agent is conceptualized. Examples (13c) and (14c) fit this generalization: the [*t*-VERB-*seng*] construction is similar to the [VERB-*ning*] construction in that it allows for an interpretation of the event as immediately realized, thus (13c) is acceptable. The fact that (14c) is unacceptable is in line with the fact that patient nominalizations in general are unacceptable.

4.2.3 X CAUSE Y DO Z (TO Q)

While the semantic types discussed so far can only occur with the causee absolutive, the type X CAUSE Y DO Z (TO Q) can occur with all three (although not every event nominalization can occur with any construction). I will discuss each of the three event nominalizations in turn, and within each of these discussions look at the three different constructions.

i. [VERB-Ø] 'S's VERB-ing, A's VERB-ing of O'. This is an event nominalizer which is possessed either by the S or by the O. It can only occur in the result absolutive construction; as (16a–b) and (17a–b) show, *kubi* and *emaiga* are acceptable for results encoded by both intransitive and transitive verbs, but as (16c) and (17c) show, *a'kwarga* is acceptable with neither of the two:

- (16) a. Waigara'pī gang dyö gubi'pī uya.
 waigara'pī gang i- dö -Ø kubi -'pī u- ya
 basket for 3s- go -NOMI do -'pī 1- ERG
 'I made him/her go for the basket' (Lit. 'I did/made his/her going for the basket')
- b. Waigara'pī gang dyö emaiga'pī uya.
 waigara'pī gang i- dö -Ø emaiga -'pī u- ya
 basket for 3s- go - NOMI put.in -'pī 1- ERG
 'I got him/her to go for the basket' (Lit. 'I put/made his/her going for the basket')
- c. *Waigara'pī gang idö a'kwarga'pī uya.
 waigara'pī gang i- dö -Ø a'kwarga -'pī u- ya
 basket for 3o- go - NOMI pressure -PAST 1- ERG
 (Intended: 'I forced him/her to go for the basket')

- (17) a. Tambik ya Karoik wönö gubi'pī uya.
 tambik ya karoik wönö -Ø kubi -'pī u- ya
 tambik A karoik hit -NOMI do -PAST 1- ERG
 'I made Tambik kill Karoik' (Lit. 'I did/made Karoik's
 killing by Tambik')
- b. Tambik ya Karoik wönö emaiga'pī uya.
 tambik ya karoik wönö -Ø emaiga -'pī u- ya
 tambik A karoik hit -NOMI put-in -PAST 1- ERG
 'I got Tambik to kill Karoik' (Lit. 'I put/made Karoik's
 killing by Tambik')
- c. *Tambik ya Karoik wönö a'kwarga'pī uya.
 tambik ya karoik wönö -Ø a'kwarga -'pī u- ya
 tambik A karoik hit -NOMI pressure -PAST 1- ERG
 (Intended: 'I forced Tambik to kill Karoik')

Although both *kubi* and *emaiga* are fully acceptable here, the consultant prefers *kubi* in this construction. The meaning difference between the two is that *kubi* conveys that the causer simply initiated the resulting event, while *emaiga* conveys that the causer did something to make the resulting event possible.

ii. [VERB-ng] 'the VERB-ing'. Again, this event nominalizer can only occur in the result absolutive construction. As the following examples show, it is not acceptable with *a'kwarga*:

- (18) a. Waigara'pī gang döng gubi'pī uya.
 waigara'pī gang dö -ng gubi -'pī u- ya
 basket for go -NOMI do -PAST 1- ERG
 'I initiated the going for the basket'
- b. Waigara'pī gang döng emaiga'pī uya.
 waigara'pī gang dö- ng emaiga -'pī u- ya
 basket for go - NOMI put.in -PAST 1- ERG
 'I initiated the going for the basket'
- c. *Waigara'pī gang döng a'kwarga'pī uya.
 waigara'pī gang dö -ng a'kwarga -'pī u- ya
 basket for go - NOMI pressure -PAST 1- ERG
 (Intended: 'I initiated by force the going for the basket')

Again, *kubi* is preferred over *emaiga*, even though both are possible and despite the identical gloss, *emaiga* suggests a greater effort on the part of the causer.

iii. [VERB-tok] 'A's future VERB-ing of O'. This nominalizer may occur in the causee absolutive and the dummy absolutive. First, consider the causee absolutives in (19a–c):

- (19) a. *Tambik emaiğa'pī uya Karoik wödok pe iya.*
 tambik emaiğa -'pī u- ya karoik wö -tok pe i- ya
 tambik_i put -PAST 1- ERG karoik hit -NOMI OBL 3_i-A
 'I made Tambik hit Karoik' (Lit. 'I put T_i in order for him_i to hit K.')
- b. *Tambik kubī'pī uya Karoik wödok pe iya.*
 tambik kubī -'pī u- ya karoik wö -dok be i- ya
 tambik_i cause -PAST 1- ERG karoik hit -NOMI OBL 3_i- A
 'I made Tambik hit Karoik' (Lit. 'I did T_i in order for him_i to hit K.')
- c. *Tambik a'kwarga'pī uya Karoik wödok pe iya.*
 tambik a'kwarga -'pī u- ya karoik wö -dok be i- ya
 tambik force -PAST 1- ERG Karoik hit -NOMI OBL 3- A
 'I forced Tambik to hit Karoik' (Lit. 'I forced T_i in order for him_i to hit K.')

As examples (19a–c) show, the combination of [VERB-*tok*] and causee absolutive is acceptable for all three causation verbs. Recall that the structure of these examples is as follows: *Tambik* is the ABS argument of *a'kwarga*, being zero-marked and occurring immediately before the verb. *Uya* is the ERG argument of *a'kwarga*. *Karoik* is the ABS argument of the nominalized result verb, and *iya* is its ERG argument (co-referential with *Tambik*).

Now consider the resultative absolutives in (20a–c):

- (20) a. *Tambik ya Karoik wödok pe emaiğa'pī uya.*
 tambik ya karoik wö -dok be Ø -emaiğa -'pī u-ya
 tambik A karoik hit -NOMI OBL ABS_Δ- put -PAST 1-ERG
 'I made Tambik hit Karoik'
- b. *Tambik ya Karoik wödok pe igubī'pī uya.*
 tambik ya karoik wö -dok be i- kubī -'pī u-ya
 tambik A karoik hit -NOMI OBL ABS_Δ- do -PAST 1- ERG
 'I made Tambik hit Karoik'
- c. *Tambik ya Karoik wödok pe a'kwarga'pī uya.*
 tambik ya karoik wö -dok be Ø- a'kwarga -'pī u-ya
 tambik A karoik hit -NOMI OBL ABS_Δ- force -PAST 1-ERG
 'I forced Tambik to hit Karoik'

Again, the combination of [VERB-*tok*] and the dummy absolutive is acceptable with all three verbs. Again, recall the structure of this construction: the ABS argument is a dummy prefix, which is realized as zero on vowel-initial verbs (*emaiğa* and *a'kwarga*), but which has an invariant surface realization *i-* with consonant-initial verbs (like *kubī*). *Uya* is the ERG argument of *a'kwarga*, and *Tambik ya* and *Karoik* are the ERG and the ABS arguments of the event nominalization.

The dummy absolutive construction is the construction most frequently offered in elicitation as a translation of causative constructions encoding a situation with a lot of force on the part of the causer. In other words, it seems to be the most natural construction for *a'kwarga* to occur in.

The question now needs to be addressed, why *a'kwarga* is not possible with the event nominalizers [VERB-Ø] and [VERB-*ng*]. The explanation developed above (i.e. that *a'kwarga*, due to its high dynamicity, is only compatible with eventive results) does not account for this unacceptability. Yet, the fact is certainly intriguing that the cline of acceptability from the preferred *kubi* over the acceptable but less preferred *emaiga* to the unacceptable *a'kwarga* mirrors the cline of causativity from the least causative *kubi* to the somewhat more causative *emaiga* to the most causative *a'kwarga*.

I would argue that the cline in acceptability can be accounted for in terms of causativity, albeit in a somewhat different way than the cases in the previous sections. Note that both of the event nominalizers that cannot occur with *a'kwarga* occur only in the result absolutive. So far, we have made nothing of the different constructions introduced in Section 3.1, treating them as purely syntactic patterns. However, once we take them to symbolize different construals of a scene, the difference between them can actually account for the cline in acceptability. Note that in the case of the RESULT absolutive it is the resulting event itself that is the absolutive argument of the causation verb, rather than the causee or some dummy element. If syntactic structure reflects semantic structure here, as hinted at in Section 3.1, then this means that the causer is viewed as acting on the resulting event itself, rather than on the causee. The glosses at least for the [VERB-*ng*], as well as the descriptions of the meanings for both nominalizations support this. Examples (19–20) focus on the fact that the causer *initiates the event* rather than the fact that the causer directly *acts on the patient* in some way. This reduces the causativity of this construction type in terms of the state–event continuum discussed above, since high causativity on this continuum requires direct contact between the causer and the causee.

5. A closer look at *a'kwarga*

Clearly, *a'kwarga* is different than the other two causation verbs in terms of its distribution across the semantic types on the state–event continuum. Its distribution is summarized in Table 3 in terms of construction type, semantic type, and nominalization type (✓ means ‘possible,’ * means ‘impossible,’ the shaded area concerns combinations of nominalizers and syntactic patterns that are impossible regardless of the matrix verb used).

Table 3. Restrictions on *a'kwarga*

X CAUSE Y BE Z _{state}	... BE Z _{person}	... BE Z _{participant}	... DO Z (TO Q)
<i>Causee absolutive</i>	*	*	✓ [V _{tr} -ning] ✓ [t-V _{itr/itr} -seng] * [ni-V _{tr} -TENSE] * [V _{tr} -tong] * [t-V _{itr/itr} -seng] * [i-V _{itr/itr} -sak]	✓ [V _{tr} -tok]
<i>Result absolutive</i>				* [V _{tr/itr} -Ø] * [V _{itr} -ng]
<i>Dummy absolutive</i>				✓ [V _{tr/itr} -tok]
<i>Causee absolutive with nominalized verb 'to be'</i>	✓	✓	✓	✓

In order to account for this distribution, I appealed to the notion of a state–event continuum, and to the idea that *a'kwarga* is highly dynamic, and hence can only encode the causative end of this continuum. Let us summarize this line of argumentation, and then take a closer look at the semantics of *a'kwarga*.

First, *a'kwarga* cannot be used to encode the semantic types 'X CAUSE Y BE Z_{STATE}' and 'X CAUSE Y BE Z_{PERSON}'. Since neither of them involves a resulting event, and since neither of them involves any activity on the part of the causee, they are too low in causativity to be compatible with the high causativity of *a'kwarga*. Evidence for this analysis comes from the fact that the corresponding constructions become acceptable if the oblique encoding the STATE/PERSON becomes the complement of the (nominalized) 'to be': this converts the semantic types to 'X CAUSE Y BEHAVE/ACT like Z_{STATE}' and 'X CAUSE Y BEHAVE/ACT like Z_{PERSON}' respectively, and thus adds the necessary dynamicity and activity on the part of the causee.

Next, *a'kwarga* cannot be used to encode the semantic type 'X CAUSE Y BE Z_{PARTICIPANT}' if the participant is a patient. This is only to be expected, since, again, there is no active involvement on the part of the causee. Again, construing the causee as more active by the use of nominalized 'be' makes the corresponding constructions acceptable. However, *a'kwarga* can be used to encode the 'X CAUSE Y BE Z_{PARTICIPANT}'-type if the participant is an Agent. This is to be expected, given the account offered so far. Note that the fact that intransitive [*i*-VERB-*sak*] is not acceptable even though technically it construes the causee as an Agent is not problematic; the event with respect to which the causee is conceptualized occurs in the past with

reference to the causing event, and can thus not render the result dynamic. More puzzling is the unacceptability of [VERB-*tong*], which seems to be semantically very similar to the acceptable [VERB-*ning*]. The difference is again in the degree to which the causee actively participates: [VERB-*tong*] means ‘one who will VERB’; if used in the result slot of a causative construction, the resulting event is taken to be the causee’s agreement to perform the action of VERB-ing sometime in the future. Again, this is not dynamic enough to satisfy the high causativity of *a’kwarga*. [VERB-*ning*], on the other hand, means ‘one who VERBs’: the interpretation here is that the resulting event is the causee’s act of becoming a VERB-er.

Finally, *a’kwarga* can encode the semantic type ‘X CAUSE Y DO Z’, which is expected, given the active involvement of the causee in this semantic type. However, *a’kwarga* is acceptable only for the causee absolutive and the dummy absolutive, but not for the result absolutive. This cannot be explained in terms of the dynamicity of the resulting event, since the event *is* encoded as dynamic. Instead, what is at issue here is the fact that the result absolutive construes the causer as acting on the whole resulting event rather than just on the causee. This is not compatible with the idea of direct contact between causer and causee evoked by *a’kwarga*.

Given that *a’kwarga* is highly causative in the sense of the term used here, the question is where this high causativity comes from. In its non-causative function, *a’kwarga* has a cluster of intuitively related meanings, which I briefly demonstrate in the following examples:

– ‘shock’

- (21) a. *Tenjiy* *akörö y-e’sak* *ya.*
 t- enji -y akörö i- eji -sak -Ø ya
 PSN- daughter -PSD with 3S-COP-PAST -NOMI ERG

Tambik a’kwarga’pī.

tambik a’kwarga -’pī

Tambik force -PAST

‘The fact that he had been with (= slept) with his daughter shocked Tambik’

- b. *Karoik a’kwarga’pī* *uya uburukui.*
 karoik a’kwarga -’pī u- ya u- puruku -i
 Karoik force -PAST 1- ERG PSN- pants -PSD

tīnu’tōik.

tī- nu’tō -ik

3O- pull.down -SEQ

‘I shocked Karoik by pulling down my pants’ (Lit. ‘... having pulled down ...’)

– ‘destroy,’ ‘forcefully act upon’

- (22) a. *Tīpai* *achi a'kwarga'pī* *iya.*
 t- pa -i achi a'kwarga -'pī i- ya
 PSN- hair -PSD hold force -PAST 3- ERG
 ‘She forced her hairpin open/out of shape’
 b. *Mirata a'kwarga'pī* *iya.*
 mīrata a'kwarga -'pī i- ya
 door force -PAST 3- ERG
 ‘He forced the door (open)’

– ‘deprive of’

- (23) *Ya'kwarga'pī* *iya* *mīre bōk.*
 u- a'kwarga -'pī i- ya mīre bōk
 1ABS- force -PAST 3- ERG child DAT
 ‘He forced my child away’ (Lit. ‘He shocked me of my child’)

In its detransitivized form, *a'kwarga* means something like ‘exhaust oneself’, as the following examples show.

- (24) a. *Karak da'kwarga'pī* *abonok eno'maik* *che.*
 karak d- a'kwarga -'pī abonok eno'ma -ik che
 karak DETR- pressure -PAST bench throw -PURP DES
 ‘Karak exerted herself to throw the bench over’
 b. *Ida'kwarga* *prada eboroik* *che.*
 i- d- a'kwarga prada eboro -ik che
 3- DETR - pressure money find -PURP DES
 ‘He is really trying hard to get money’

How can we unify these uses, i.e. what is the notion underlying all these uses? The etymology of *a'kwarga* is enlightening in this respect:

- (25) *a'kwari* + *ga*
 ‘spirit’ ‘remove (VERBALIZER)’

This etymology is transparent to the speaker, since the word *a'kwari* still exists (and, in fact, has an important place in mythology), and since *-ga*, being at least semi-productive, shows up in a number of morphologically transparent verbs (cf. Wiedrick 1999):

- (26) a. *abiri* + *ga* > *abiriga*
 ‘feather’ remove.VBZR de-feather
 b. *argok* + *ga* > *argo'ka*
 ‘hat’ remove.VBZR ‘take off sb.’s hat’

c.	<i>emu</i>	+	<i>ga</i>		>	<i>emuga</i>
	‘testicle’		remove.VBZR			‘castrate’

Accepting the etymology, then, *a'kwarga* would mean something like ‘remove the spirit of’, which may seem rather far removed from the cluster of meanings discussed above. However, once we gain a better understanding of what ‘spirit’ refers to here, things become clearer: the Akawaio believe that every person, animal, or object has its unique *a'kwari*, an inner force that cannot be changed or destroyed, but that will leave an entity when the entity is destroyed (D. Fox, p.c.). This rough sketch of course does not do justice to the complex belief system of the Akawaio, but it will do for our purposes here. The unifying imagery behind the semantic notions encoded by *a'kwarga* can indeed be claimed to be ‘robbing an entity of its essence.’ This imagery is not as strange as it may seem. The notion of *a'kwari* is not too different from the notion of ‘essence’, as posited by the ancient Greek philosophers and as present in the folk theories of children and adults from Western cultures. The image of expending that essence actually underlies Indo-European words and expressions for the same semantic domains encoded by *a'kwarga*: For example, English has a series of metaphors for shock and fear that involve the imagery of robbing someone of some inner substance, such as *to scare THE LIVING DAYLIGHTS out of someone*, *to scare s.o. WITLESS*, etc., and there are both Latin-based and Germanic words for exhaustion in English that are diachronically based on a similar imagery, such as the word *exhaust* itself (Lat. *ex-* ‘out’ + *haurire* ‘draw’), the word *exert* (Lat. *ex-* ‘out’ + *serere* ‘bind’), or the expressions *to SPEND oneself*, *to feel DRAINED*.

Coming back to *a'kwarga*, its lexical uses all imply an extreme amount of (physical or intense abstract) force on the part of the Agent, direct contact with the Patient, and a massive impact on the latter; all these properties emerge from the conceptual imagery underlying them. These semantic properties are retained in the causative uses: *a'kwarga* is appropriate only where there is great resistance on the part of the causee, a resistance that is overcome by force and that causes physical or emotional damage to the causee, that may well be long-lasting. In addition, *a'kwarga* has the strongest factive implicatures of all three causative verbs in Akawaio, the causee is most actively involved in the resulting event.

6. Conclusion

This paper has described analytic causatives in Akawaio. Two issues of greater theoretical interest emerged.

The first issue is that of the state–event continuum. I have argued that an adequate description of analytic causatives presupposes a semantic continuum between these two types of result. Since in purely syntactic terms resulting-state causatives (and resultatives) and resulting-event causatives are identical in Akawaio, all asymmetries between them must be explained on the basis of a general semantic distinction between caused events and caused states. Causation verbs (i.e. matrix verbs in causative constructions) have different degrees of causativity, based on generic properties of causation scenes. I have suggested that generally, high causativity may be defined as high semantic transitivity of a causing event whose transitivity carries over into a highly transitive resulting event. More specifically, the properties that make a sequence of events highly causative are (i) a great resistance on the part of the causee, (ii) a forceful direct contact between causer and causee to overcome this resistance, (iii) a subsequent active involvement on the part of the causee in the result, and (iv) physical or emotional damage to the causee as a consequence. The three causation verbs in Akawaio can be characterized in these terms, and their overall degree of causativity interacts with the semantic continuum between causativity and resultativity. Most importantly, the causation verb with the highest dynamicity, *a'kwarga*, only encodes the event–result end of the continuum. It remains to be seen whether this phenomenon can be generalized to a typological statement that if a language has causation verbs with different degrees of dynamicity, the more dynamic one(s) will only encode the causative end of the state–event continuum. Certainly the English verb *force* behaves in this way, but of course the cross-linguistic validity of this observation can not be established on the basis of two languages.

The second issue concerns the motivation of a causation verb's semantics by the semantics of its lexical source. In the context of this issue, it is again *a'kwarga* that is especially interesting, because it shows how causation verbs emerge from verbs encoding particular modes of interaction that have consequences for their participants. The specific properties of such a particular mode of interaction are retained by the causation verb, and seem to be just as important as the fact that these verbs encode causation. In fact, in the case of *a'kwarga*, it is the forcefulness of the interaction, the initial resistance of the causee, the breaking of this resistance, and the negative consequences for the causee that are the primary semantic content. The fact that the interaction results in an action by the causee is in a sense important only because it is the nature of this action by the causee which is to a large part responsible for the resistance and the negative consequences.

In essence, then, the case of *a'kwarga* is interesting because it shows how a causative construction emerges from a rich model of the inner life of entities, and the changes in this inner life that may occur as the consequence of their interaction with other entities. The way in which a world view gives rise to a set of formal

restrictions on a particular verb and the set of constructions it could potentially occur in is what, in my view, the study of language is all about: understanding the way a speech community perceives the world by learning how they talk about it.

Notes

1. The paper is based on data elicited partly in the context of a field methods class held during the academic year 1999–2000 at Rice University. I would like to thank my consultant, Desrey Fox, for her patience and willingness to spend countless hours teaching me her language. I would also like to thank the participants of this and a previous field methods class, whose data provided a rich background for my own work. Here, Fine (1999) deserves special mention. Although her semantic analysis of Akawaio causatives is very preliminary and neglects syntactic issues altogether, it has provided me with stimulation and guidance in the early stages of my investigation. Finally, I would like to thank the participants of the 2000 Workshop on American Indigenous Languages at UC Santa Barbara, where I presented some of the material contained in this paper (Stefanowitsch 1999) for their critical questions and perceptive comments, and last but not least, I thank Spike Gildea for teaching me how to be a linguist and for providing detailed comments on an earlier draft of this paper.

2. This paper uses the orthography developed by Spike Gildea and Desrey Fox at Rice University as a proposal for an official orthography. The phonetic values for most characters employed are self-explanatory; the only exceptions are: {i} for a high central unrounded vowel, {ö} for a mid central unrounded vowel, {ng} for a velar nasal (not a sequence of a nasal and a velar), {ʔ} for a glottal stop, and {r} for a lateral alveolar flap. In sequences of two orthographic vowels, the second vowel is phonetically a glide, e.g. {au} represents [aw].

3. In addition to the system shown here, there is a non-ergative alignment system that seems to be the reflex of an old inverse system (the Set I system found in many Cariban languages, cf. Gildea 1998). The relation between the two systems is poorly understood at the moment; there is nothing to suggest that Akawaio is a split ergative language according to any of the traditional criteria proposed in Dixon (1994). The inverse system is very infrequent both in elicitation and in texts, occurring mainly in quoted speech and at the climax of a narrative (just like in Wayana, cf. Tavares, in progress). Gildea (p.c.) suggests it is in the last stages of being replaced by the newer ergative system. The inverse system has no bearing on the issues discussed in this paper, and will be ignored here. For a description of the system cf. Mammalis (1999).

4. For the sake of completeness, note that in the inverse system there is also the relativizer *nek* which can be used to form relative clauses, as in the following example:

- | | | | | | | |
|-----|--|-------|-----------------|-------|-----------------------|------------------|
| (i) | <i>Nida'mo'kai</i> | | <i>nek kirö</i> | | <i>kuzang warawok</i> | <i>maypremu.</i> |
| | nī- da'mo'ka | -i | nek kirö | -rö | kuzang warawok | maypremu |
| | 3S- fall | -PAST | REL 3SG | -EMPH | tall.one man | friend |
| | 'The guy who fell is the tall man's friend.' | | | | | |

5. I use the term *causation verbs* to refer to the matrix verb in an analytical causative construction, like *make* in *John made Mary bake a cake* (to distinguish these from verbs that

have an intransitive/transitive alternation, and are typically referred to as ‘causative verbs’, e.g. *bake* in *The cake bakes* vs. *Mary bakes the cake*).

6. Analytic causatives are often mentioned in discussions of morphological and lexical causatives, but they are rarely discussed in their own right (cf. Stefanowitsch 2001). This may be due to the fact that they are relatively rare both typologically and within individual languages (cf. Comrie [1989:167] for this point, cf. also *ibid.* Ch. 8 for a discussion of the typological literature).

7. Let me briefly comment on some notational conventions: the oblique nominalization with all its arguments is underscored in the examples here and throughout the paper. The arguments of the causation verb are glossed as ERG and ABS respectively, the arguments of the nominalization will be glossed using the labels S, A, and O. This has no theoretical significance, it is meant to help the reader orient themselves. Recall that the word order in (4) is grammatical, but that it is not the most natural word order: the ergative is preferred in post-verbal position. It is shown in sentence-initial position in this subsection for expository reasons. In the remainder of the paper, the word order spontaneously offered by the consultant is shown.

8. Sentences like (8c) are never offered spontaneously or as translations of the intended meaning in elicitation. They are also rejected most of the time when offered to the consultant. At other times they are accepted under heavy contextualization with nouns that imply that their referents go through some kind of transition that is to some degree under their control in order to become what they are. Thus, the following examples are much more likely to be accepted than (5c), but even these will be overwhelmingly rejected:

- (i) a. *Tino'pī be ya'kwarga'pī iya.*
 t- no'pī pe u- a'kwarga -'pī i- ya
 3R- wife OBL 1.ABS- pressure -PAST 3- ERG
 ‘he forced me to be his wife’
- b. *Odomangyek pe ya'kwarga'pī iya.*
 odomangyek pe u- a'kwarga -'pī i- ya
 hunter OBL 1.ABS- pressure -PAST 3- ERG
 ‘He forced me to be a hunter.’

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Causation in Matses (Panoan, Amazonian Peru)*

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1. Introduction

This paper describes the different grammatical means that the Matses¹ language uses to code causative situations. An interesting aspect of causative constructions in Matses is that those constructions that code prototypical causative situations, do not code causation exclusively, and the causative construction that does code causative situations exclusively, codes a very non-prototypical type of causation (see Sec. 2 for definitions of “causative construction” and “prototypical causation”). Causative situations can be coded in Matses as follows: morphologically, the verbal suffix *-me* codes causation and remoteness (Sec. 3). There are transitive verb roots that could be described as entailing a causation event (Sec. 4), but these are not treated morpho-syntactically differently from transitive verbs that do not contain causative notions in their meaning. As is common for agglutinating languages, causation is not coded in analytic (syntactic/periphrastic) constructions, but directive causative events can be related in two-verb constructions where an imperative command is quoted (as in *Bob told Jim, “Go!”*), which in some cultural contexts strongly imply, but do not entail, the completion of the command (Sec. 5). And Section 6 describes nominalization constructions that can be used to refer to causative events, with the locus of the causal relationship existing between the S/O argument of the original verb and the referent of the derived noun.

The more interesting findings in this study include the following: causativized transitive verbs have two morpho-syntactically identical object arguments, but because there seems to be no morpho-syntactic means of distinguishing direct and indirect objects anywhere in the language, it is difficult to characterize causative constructions as exhibiting syntactic doubling of the Direct Objects or the Indirect Object (Sec. 3.2 & 3.3). There are two sets of transitive “causative” lexemes that ap-

pear to be diachronically at an intermediate stage between productive morphological causatives and suppletive lexical causatives and which exhibit semantic properties that are intermediate between those normally found to be associated with these causative types (Sec. 4.2 & 4.4). A nominalizing suffix, *-anmës*, exclusively codes a very non-prototypical type of causation, and might be best glossed as ‘the referent of the nominalization (usually inanimate) is one that non-volitionally, indirectly and often mysteriously causes helpless victims to enter some undesirable, enduring state’ (Sec. 6.1). The fact that the only category of causation that has been selected for exclusive linguistic coding is that marked by the suffix *-anmës*, suggests that culture-specific notions of causation can be relevant for describing causative constructions in a language. A final surprising finding is that the direct-indirect causation continuum is played out more elaborately in nominalization constructions than in active verb constructions.

Matses is a dominantly agglutinating and primarily suffixing language with a preferred SOV constituent order, but word order is relatively free, with grammatical relations differentiated by ergative-absolutive case marking and a nominative-accusative person agreement system. Open classes include nouns, verbs, adjectives, and adverbs; pronouns, postpositions, demonstratives, interrogatives and particles form closed sets. Transitivity is strictly grammaticalized in Matses, with all verb roots having a basic syntactic valence that can be altered only with overt valence-adjusting morphology. Noun and adjective roots (and some postpositions) may occur in predicate position simply by attaching verbal inflectional morphology, but verbs must take special nominalizing morphology to be treated morphosyntactically as nouns. An aspect of Matses grammar that will be essential to understanding causative syntax is that Matses grammar does not recognize “Dative” or any comparable notion as a grammatical category. Ergative noun phrases take the enclitic (*-n*) and absolutive arguments appear as bare nominals (*-Ø*), while all obliques must be followed by postpositions marking peripheral relationships to the verb, including Instrumental (*-n*), Genitive (*-n*), Locative/Temporal (*-n*), Locative/Allative (*-no*) and several free postpositions marking spatial relations, such as *tëdion* ‘under’ and *nantan* ‘in’. Patients, recipients, beneficiaries, maleficiaries, and causees are always coded as absolutive arguments. Other specifics of Matses grammar will be presented where they are relevant to the discussion.

2. Definitions of causation

One of the definitions of causation that is most frequently referred to in the linguistics literature on causation is Shibatani’s (1976: 1) characterization of causative constructions, where he defines causative constructions as those that express a *causative situation*, defined as follows:

Two events can be said to constitute a causative situation if the following two conditions hold:

- a. The relation between the two events is such that the speaker believes that the occurrence of one event, the “caused event,” has been realized at t_2 , which is after t_1 , the time of the “causing event.”
- b. The relation between the causing and the caused event is such that the speaker believes that the occurrence of the caused event is wholly dependent on the occurrence of the causing event; the dependency of the two events here must be to the extent that it allows the speaker to entertain a counterfactual inference that the caused event would not have taken place at that particular time if the causing event had not taken place, provided that all else remained the same.

This is the definition that I will use in this paper when I refer to “causation” and “causative situations.” Another definition concerning causation that I refer to in this paper is the definition of “prototypical causation.” For talking about “prototypical causation,” I will refer to Lakoff’s (1987:54–55) characterization:

Prototypical causation appears to be direct manipulation, which is characterized most typically by the following cluster of interactional properties:

1. There is an agent that does something.
2. There is a patient that undergoes a change to a new state.
3. Properties 1 and 2 constitute a single event; they overlap in time and space; the agent comes in contact with the patient.
4. Part of what the agent does (either the motion or the exercise of will) precedes the change in the patient.
5. The agent is the energy source; the patient is the energy goal; there is a transfer of energy from the agent to the patient.
6. There is a single definite agent and a single definite patient.
7. The agent is human.
8.
 - a. The agent wills his action.
 - b. The agent is in control of his action.
 - c. The agent bears primary responsibility for both his action and the change.
9. The agent uses his hands, body, or some instrument.
10. The agent is looking at the patient, the change in the patient is perceptible, and the agent perceives the change.

3. Morphological causatives

The only productive grammatical means of coding causation in active clauses is with the verbal derivational suffix *-me*. Thus, as might be expected from a language ecology viewpoint, *-me* covers a wide range of causative meanings, and can be used with almost every verb root or stem in Matses.

3.1 Semantic aspects of *-me*

Constructions with the general causativizer, *-me*, refer to causative situations covering a wide range of semantic notions of causation, including prototypical causative events and more marginal instances of causation, including all the subtypes described in Talmy (2000). As shown in (1)² and (2), the suffix *-me* codes a wide range of notions ranging from direct to indirect causation, as defined in Shibatani and Pardeshi (this volume).

- (1) *aton mado-mpi-Ø pe-me-o-sh*
 3GEN SON-DIM-ABS eat-CAUS-PAST-3
 ‘S/he fed his/her little son.’
 – by holding his mouth open
 – by feeding him with a spoon
 – by telling him to eat
 – by handing him a plate of food
- (2) *sicaid chiuid-me-o-sh*
 strained.drink spill[intr.]-CAUS-PAST-3
 ‘S/he spilled the drink.’
 ‘S/he caused the drink to spill.’
 ‘S/he let the drink spill.’

The elicited sentences above and the text excerpts below (3–8) illustrate the range of usages of *-me*, which span causative meanings including contactive and distant causation (Masica 1976), directive and manipulative causation (Shibatani 1976), sociative and non-sociative causation (Shibatani and Pardeshi this volume), deliberate and incidental causation (Givón 1975), and Author (unintentional) and Agent (intentional) causation (Talmy 2000).

- (3) *chish-me-quid poshto-n matses-n*
 suck-CAUS-HAB woolly.monkey-ERG Matses-ERG
chish-me-ac-bimbo-en
 suck-CAUS-ACT.NZR-like-ADVZR:TR
 ‘Woolly monkeys suckle [their young] in the same way that Matses suckle [their young].’
 (A-I 052 poshto 21)

- (4) *nibën-quin matses-n puduen-me-e-c*
 search-while:s/A>A Matses-ERG exit-CAUS-NPAST-INDIC
 ‘While searching, the Matses cause [pacas (dog-sized rodents)] to exit
 [their burrows].’ (A-p95 U tambis 9)
- (5) *bacuë-bo-Ø cuedën-me-nu*
 child-COLL-ABS sing-CAUS-INTENT:1
 ‘I’m going to lead the children in song.’
- (6) *adoshic matses-n cuen-me-quid acquimbo-en*
 then:TR Matses-ERG run.off-CAUS-HAB strong-ADVZR:TR
cuëd-quin
 call-while:s/A>A
matses-n cuen-me-quid bëdi dapa-Ø
 Matses-ERG run.off-CAUS-HAB jaguar big-ABS
 ‘Then, Matses make them run off by yelling loudly...Matses make jaguars
 run off.’ (A-IV 036 bëdi dapa 35)
- (7) *dadpen-Ø tësh-shun aton chido-Ø*
 many-ABS pull.off-after:s/A>A 3GEN woman-ABS
sica-me-e-c matses-n
 strain-CAUS-NPAST-INDIC Matses-ERG
 ‘After pulling off many [peach palm fruits], Matses have their wives strain
 them [to prepare a drink].’ (A-p20 U titado 10)
- (8) *mayan-n shubu-Ø se-e-c ca-me-nuen*
 demon-ERG house-ABS hit-NPAST-INDIC say-CAUS-PURP:s/A>A
shubu-Ø
 house-ABS
cane-e-c cuesban-n
 throw.at-N PAST-INDIC bat-ERG
 ‘The bats throw fruits at the house in order to make [people] think “A
 demon is hitting the house.”’ (E-XI 049 cuesban 24)

From a force-dynamic point of view (Talmy 1985), *-me* does not just code “causation,” in the sense of applying a force, but it also codes “letting,” and “enablement” in the sense of removing a force (9 & 10).

- (9) *ado-ac-bi chud-me-an-enquio*
 do.thus-after:o>s/A-EMPH copulate.with-CAUS-1O-NEG
 ‘After that, she wouldn’t permit me to have sex with her.’
 (K-XXII 010 chema 091)

- (10) *bed-Ø cain-shun bed-Ø se-me-enda*
 grab-ABS wait-after:S/A>A grab-IMPER pierce-CAUS-NEG.IMPER
 “‘Grab them! Grab them after waiting for them! Don’t let them shoot
 you!’” (K-XXI 010 dēmushbo 30)

Perhaps the least prototypical extended notion of causation coded by *-me* are those coding unintentional, reflexive letting/enablement, as in (10) and (11a), a notion that can also be expressed using the reflexive/detransitivizing suffix *-ad* (11b) in a construction resembling an English “*get-passive*” (Givón and Yang 1994).

- (11) a. *nisi-Ø pe-me-o-mpi*
 snake-ABS bite-CAUS-PAST-1ERG
 ‘I let myself be bitten by a snake.’
 b. *nisi-n pe-ad-o-bi*
 snake-INST bite-DETRNZ-PAST-1ABS
 ‘I got myself bitten by a snake.’

In both (11a) and (11b) the entity that has ultimate control of the action is co-referent with the patient, but in (11a), the valence is increased by adding a causer (actually an “enabler”) that is co-referent with the patient, while in (11b) the valence is decreased by peripheralizing the A of the original verb.

The only evident partitioning of semantic domains by constructions with *-me* is that when *-me* is attached to an intransitive verb that has a lexical causative counterpart (Sec. 4), the range of meanings coded by the morphological causative does not usually include instances of more direct causation. In these cases the causative transitive root codes the more direct meanings. But with transitive verbs and most intransitive verbs, the meanings coded by *-me* span the whole range of direct and indirect meanings, similarly to the Quechua causative suffix, *-chi* (Weber 1989).

3.2 Syntactic aspects of *-me* constructions

The suffix *-me* is used very productively, and can apparently be used with all verb stems except for a small set of intransitive roots (discussed below under lexical causatives, Sec. 4.4) and the copular verb *ne* ‘be’. It can be used with transitive and intransitive verb stems (1–10), and even with ditransitive roots (12)³ and iteratively (13).⁴

- (12) *mene-me-o-sh*
 give-CAUS-PAST-3
 ‘She made her give it to her.’

- (13) *te-me-me-o-sh*
 cut-CAUS-CAUS-PAST-3
 ‘He made him make him cut it.’

“Active” and “inactive” are grammatically relevant categories for causative constructions in some languages (Shibatani and Pardeshi this volume), but there is no formal distinction in Matses that correlates with these categories. However, this distinction may have been relevant in Matses in the past, as suggested by patterns in Matses lexical causatives (see Sec. 4.2). By Comrie’s (1989) definition, *-me* would be considered a prototypical morphological causative on account of having a very high level of productivity and being phonologically bound to the predicate. However, syntactically, morphological causative constructions with *-me* deviate from Comrie’s (1976) hierarchy of grammatical relations for coding the causee, as discussed subsequently.

Suffixation with *-me* results in a syntactic valence increase, i.e., it increases the number of core arguments that can be associated with the verb stem by one (but see Sec. 3.5). Thus, intransitive roots become transitive when causativized with *-me*, with the S argument of the original intransitive verb becoming co-referent with the O argument of the derived transitive causativized verb (both marked as absolutive), and a newly-introduced participant representing the causer becoming the A argument (and thereby taking the ergative case marking). There is no alternative marking strategy. The following overheard sentences illustrate the syntactic relationship between a simple intransitive clause and its causativized counterpart:

- (14) a. *checa-Ø cuen-o-sh*
 opossum-ABS run.off-PAST-3
 ‘The opossum ran off.’ [reported by Romer]
- b. *domer-mpi-n checa-Ø cuen-me-o-sh*
 Romer-DIM-ERG opossum-ABS run.off-CAUS-PAST-3
 ‘Little Romer let the opossum escape.’ [reported by Romer’s older sister]

Causativization of transitive roots (or stems) is a bit less straightforward with respect to the arguments of the causativized verbs. As with causativized intransitives, the A argument slot is filled by a newly-introduced participant representing the causer and appearing in the ergative case. But the two other core arguments of the derived verb have identical morphological and syntactic properties corresponding to that of any O of a bivalent verb: both noun phrases are marked in the absolutive case and can occur in the same set of positions in the clause (but see Sec. 3.5 for an exception). In other words, if one analyzes a ditransitive clause as derivationally related to a particular non-causative transitive clause, the A and the O of the (“underlying”) non-causative clause both become O’s in the causative clause, with the

one that was the A becoming the causee. But, because there is no morpho-syntactic means of distinguishing the two absolutive-marked noun phrases in the ditransitive clause (see next section for basic ditransitive clauses), sentences like (15a) are ambiguous with respect to the patient and the causee, as there is actually no way to determine if (15a) is derivationally related to (15b) or (15c).

- (15) a. *bacuë-bo-n cachita-Ø cachina-Ø pe-me-o-sh*
 child-COLL-ERG caiman-ABS chicken-ABS eat-CAUS-PAST-3
 ‘The kids fed a chicken to the caiman.’
 ‘The kids fed caiman [meat] to the chickens.’
- b. *cachita-n cachina-Ø pe-o-sh*
 caiman-ERG chicken-ABS eat-PAST-3
 ‘The caiman ate the chicken.’
- c. *cachina-n cachita-Ø pe-o-sh*
 chicken-ERG caiman-ABS eat-PAST-3
 ‘The chicken ate caiman [meat].’

In most cases, however, trivalent phrases are disambiguated easily by context or common sense, as in (16). But there is no way to identify a “source” or “underlying” transitive non-causative clause, and there is no morpho-syntactic means of distinguishing the two absolutive-marked noun phrases, so there is always a potential for ambiguity.

- (16) *nuëcquid-uid-i-Ø onina-n aton bacuë-Ø*
 fish-only-EMPH-ABS giant.otter-ERG 3GEN offspring-ABS
pe-me-e-c
 eat-CAUS-NPAST-INDIC
 ‘The giant otter feeds only fish to its young.’
 ?‘The giant otter feeds its young only to fish.’ (A-p69 U onina 5)

It is actually somewhat rare for trivalent clauses like (16) to have all the participants mentioned explicitly, since third person participants are often “zero-pronominalized” in response to topic-focus and determinacy motivations. Also, first, second, or third person patients may also be omitted when they are coreferent with the causer, as in (10) and (11a). But when all participants are mentioned explicitly as in (16), the relative ordering of the constituents is not governed by proposed universals about the “iconicity of the construction” (Kozinsky and Polinsky 1993:225). Rather, the ordering in (16) is in response to the information given in (17) (the sentence directly preceding [16] in the text): the new, focused information goes up front.

- (17) *acte dada quiusudquid-n-shun onina-n aton*
 stream trunk bluff-LOC-TR **giant.otter-ERG** 3GEN
bacuë-Ø tish-e-c
offspring-ABS bear-NPAST-INDIC
 ‘In a steep bank of a main stream, the giant otter gives birth to its young.’
 (A-p69 U onina 4)

These ditransitive causative constructions can be considered cases of “syntactic doubling,” as described by Comrie (1976), where causativized transitive verbs come to have two noun phrases exhibiting the properties of a single grammatical relation type, be it Direct Object, Indirect Object, Oblique or Subject. Matses, however, differs from those language described in Comrie (1976) in that in Matses there appears to be no grammatical distinction between Direct and Indirect Objects in simple ditransitive sentences either, so “syntactic doubling” is not a characteristic unique to causative constructions. This brings us to a problem in typological description: if we cannot differentiate Direct and Indirect Objects in clauses with ditransitive roots, do Matses causative-of-transitive constructions exhibit syntactic doubling of the Direct Object or of the Indirect Object? It is not uncommon for languages to lack the Indirect Object grammatical relation, but in these languages it is from the Oblique grammatical relations that Indirect objects are not distinguishable. By contrast, in Matses Obliques are easily distinguished morpho-syntactically from core arguments (Obliques are invariably followed by postpositions), but it is Direct Objects and Indirect Objects that are not distinguishable. Because the existence of two indistinguishable objects in a clause is certainly a controversial claim, a brief description of Matses double object constructions follows.

3.3 Double-object constructions

Gary and Keenan (1977: 117) observe about Kinyarwanda, “We have argued that unmarked Patient and Recipient-Benefactive NPs in Kinyarwanda share an overwhelming number of syntactic properties and hence should not be considered to bear distinct grammatical relations to the verb, but rather should be viewed as subtypes of the same grammatical relation.” However, having two “object” noun phrases in a clause is not consistent with Relational Grammar, Lexical Functional Grammar, and other formal theories. So Gary and Keenan’s (1977) analysis has been frequently rejected (Dryer 1983; Perlmutter and Postal 1983; De Guzman 1987; Polinsky and Kozinsky 1992; Bresnan and Moshi 1993), principally based on the few syntactic processes that distinguish the two “objects” in Kinyarwanda ditransitive constructions. In Matses, however, I have not been able to find any independent morpho-syntactic basis at all for grammatically distinguishing indi-

rect object from direct object (the constituent in ditransitive clauses that is more similar to the O in transitive clauses [Hudson 1992]). Using Polinsky and Kozinsky's (1992) terminology, Matses ditransitive clauses exhibit "syntactic doubling" of grammatical relations, not just a "coding conflict."

In Matses ditransitive clauses, there can be two absolutive-marked noun phrases (absolutive arguments are "zero-marked"), and these can occur in the same set of syntactic positions. This applies to ditransitive roots (e.g., *mene* 'give'), as well as valence-increase of transitive verbs by causatives and applicatives. For example, in (18) the noun phrases, *con champi* and *mibi* can interchange positions without changing the meaning of the clause, and in either order the clause could also have the unlikely (but grammatical) meaning, 'I'm going to give you *to* my daughter.'

- (18) *con champi-Ø mibi mene-nu*
 1GEN daughter-ABS 2ABS give-INTENT:1
patient recipient
 "I'm going to give you my daughter." (K-XXII 006 chema 062)

While the ordering of the recipient and patient in (19) is consistent with Kozinsky and Polinsky's (1993:225) "canonical [word] order," (18) does not conform to it, and so word order cannot be used to distinguish the two objects (see also [15] in Sec. 3.2).

- (19) *cania-bo-chedo-bi-Ø bacuë-mpi-chedo-bi-Ø tëshë-Ø*
 young.man-COLL-TOO-EMPH-ABS child-DIM-TOO-EMPH-ABS piece-ABS
 (conjoined) **recipient recipient patient**
mene-ban-quid tsësio dapa-n
 give-DISTR-HAB old.man big-ERG
agent
 'The eldest old man gives out pieces [of meat] to the young men and the little kids.' (C-III 001 shëcten 43)

It is similarly not relevant to talk of "preferred word orders" with respect to the arguments in trivalent clauses, as different orders are preferred in different discourse contexts. For example, the clause-final position of the patient in (20) is on account of it being clearly old information; if the preceding subordinate clause-chaining clauses were about the husband, we would expect the husband to be clause final or "zero pronominalized" in the matrix clause (see also examples [16] and [17] in Sec. 3.2).

- (20) *cuës-shun* *ësh-chic-shun* *pëchush-shun* *ushë*
gather-after:s/A>A seed-pull.out-after:s/A>A stretch-after:s/A>A sun
mëduc *san-shun* *tanun-acsho* *toshcodocate-n*
in.middle.of put:PL-after:s/A>A dry-after:A/O>O spindle-INST
toshcodoca-shun *chido-n*
spin-after:A/O>A wife-ERG
agent
aton *bënë-Ø* *mene-quid* *pia* *tsimac-te-Ø*
3GEN husband-ABS give-HAB arrow wrap.notch-INST.NZR-ABS
recipient **patient**
'After gathering it, after pulling out the seeds, after stretching it out, after putting it in the sun, after it dries, after spinning it with a spindle, the woman gives her husband the "arrow notch wrapper" [cotton thread].'
(B-p54 F sedquid 2)

As mentioned above, third person noun phrases can be left out of sentences (i.e., they are "zero pronouns") when they are one of the core arguments (S, A, O), but not when they are peripheral participants. In ditransitive clauses like (21) and (22), either the patient or the recipient noun phrase can be zero-pronominalized.

- (21) *ado-shun* *utsi-Ø* *mene-quid*
thus-after:s/A>A other-ABS give-HAB
patient
'After that, she gives away another one [to a female relative].'
(A-XIII 042 tote 13)
- (22) *ado-tanquin* *nain-tanquin* *aton* *bënë-Ø* *mene-quid*
do.thus-after:s/A>A finish-after:s/A>A 3GEN husband-ABS give-HAB
recipient
'After doing that, after finishing it, she gives [the cotton thread] to her husband.'
(A-XIII 044 sedquid 09)

Other morpho-syntactic tests that have proved useful for identifying indirect objects in other studies (Hudson 1992; Taylor 1998; Wilawan 2000) are either not applicable to Matses, or have also failed to distinguish the noun phrases in Matses double-object constructions. In Matses:

- either object can be passivized
- either object can be relativized on
- either object controls inter-clausal co-reference with clause-chaining suffixes that refer to an O participant in one of the clauses
- neither object can be put into a postpositional phrase

- either object can be topicalized (by fronting and/or marking with a focus enclitic)

It is worth noting that Valenzuela (this volume) has a similar analysis for Shipibo-Konibo, with no forthcoming covert resolution of syntactic doubling in absolutive ditransitive clauses, including causative-of-transitive clauses, so this may be common in the Panoan language family, rather than being unique to Matses. And Yagua, a genetically unrelated, but geographically proximate language, has also been analyzed as having two indistinguishable objects in both causative-of-transitive constructions and in simple ditransitive clauses (Payne and Payne 1990).

If there were some way to distinguish direct objects from indirect objects in underived ditransitive clauses, it might be possible to determine if the causees in derived ditransitive causative clauses were treated as Direct Object or Indirect Object. This is a significant distinction in that doubling of Indirect Object is common, while doubling of Direct Object occurs only in “restricted fashion” (Comrie 1976:295). However, no such distinction is forthcoming, and so Matses marking of the causees defies conventional typological descriptions involving implicational hierarchies such as that found in Comrie (1976). The case in Matses is nevertheless consistent with the commonly observed coincidence that causative constructions tend to have syntactically similar non-causative clause types (Nedyalkov and Silnitsky 1973; Shibatani 1976; Comrie 1976, 1989; Dixon 2000). This observation together with the Matses facts, in light of the fact that the reverse is not true (i.e., languages like English that have non-causative double-object constructions do not necessarily have causative double-object constructions) seem to support Kemmer and Verhagen’s (1994) approach describing causative constructions as modeled after simple clauses.

3.4 Causatives and applicatives

Because of the varied functions associated with *-me*, one might imagine that it is a general transitivizer rather than a causativizer. But we find that benefactive/malefactive constructions are not accomplished with *-me*, but with the applicative suffix *-shun*. The suffix *-shun* is a productive verbal suffix that can be attached to transitive (but not intransitive) verbs to express that the action significantly affects one of two absolutive-marked arguments. If we describe applicative constructions as being derived from non-applicative transitive clauses, then *-shun* would contrast with *-me* in that it increases the syntactic valence of the transitive verb, keeping the A and O arguments co-referent with the original A and O, and adding a newly-introduced core argument (the beneficiary/maleficiary) with all the morpho-syntactic properties of an O (23 & 24).

- (23) *matses-n aton tsien-chedo-bi-Ø chompish-Ø*
 Matses-ERG 3GEN vulva-too-EMPH-ABS two.toed.sloth-ABS
pe-shun-quid
 eat-APPL-HAB
 ‘Matses eat even its vulva, to the two-toed sloth’s [detriment].’
 (A-IV 024 chompish 23)
- (24) *sicaid buenac-buenac-te que-quin*
 strained.beverage stir-[redup=Iter]-INST.NZR say-while:s/A>A
dada-n aton chido-Ø bëda-mbo-en chësh-shun-quid
 man-ERG 3GEN woman-ABS good-AUG-ADVZR:TR carve-APPL-HAB
 ‘Saying, “[It’s a] beverage stirrer,” men carve it well for their wives.’
 (A-XIII 024 sicaid buenac-buenacte 07)

By contrast, causative constructions with *-me* result in the A of the original transitive verb becoming an O (the causee) in the *-me*-derived ditransitive verb (Fig. 1).

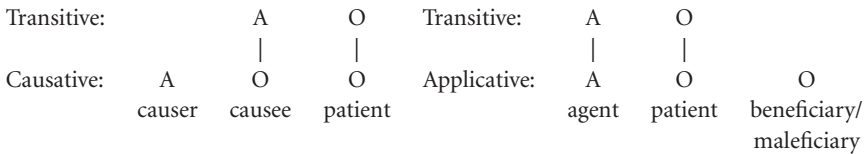


Figure 1. Co-reference relationships between core arguments of transitive verbs and ditransitive causative and applicative verb stems

There is no way to paraphrase applicative constructions into bivalent simple transitive clauses, because, as explained in the introduction, there is no postposition that marks a beneficiary or maleficiary (or recipient) role. The strategy that most closely approximates a paraphrase of an applicative construction in Matses is to mark the beneficiary/maleficiary with the genitive postposition, *-n*. This works most of the time because if the patient of the simple transitive clause is an object or a body part, the owner is likely to be affected by the action, or the beneficiary may become the owner of an object. But, this is not a true paraphrase because it does not entail that the possessor is affected by the action, and the genitive construction cannot be used when the affected party is not the present or future owner of the thing being acted upon. A more accurate paraphrase would require an additional clause.

The applicative and the causative suffixes can occur on the same verb root in either order:

- (25) a. *buan-shun-me-o-sh*
 carry-APPL-CAUS-PAST-3
 ‘He made him carry it for him.’

- b. *buan-me-shun-o-sh*
 carry-CAUS-APPL-PAST-3
 ‘He made him carry it for him.’

The English translations are ambiguous; in Matses there is a meaning difference. The distal suffix has wider scope: in (25a), the beneficiary benefits from the carrying (i.e., he doesn’t have to carry it himself), and in (25b), the beneficiary benefits from the causing event (i.e., he doesn’t have to do the coercing to get the person to do the carrying).

3.5 Instrument “promotion”

The syntactic effects of *-me* would be very regular, if it were not for constructions like the following:

- (26) *tiantē-Ø* *dectan-shun* *matses-n* *nēishamē-Ø*
 bamboo-ABS set.trap-after:S/A>A Matses-ERG tapir-ABS
se-me-quid
 pierce-CAUS-HAB
 ‘After setting a bamboo trap [a spring-loaded bamboo blade released by a trip-wire], Matses cause tapirs to get stabbed.’ [?lit. ‘... Matses make it stab tapirs.’] (A-I 045 *nēishamē* 07)
- (27) *adembidi* *matses-n* *cues-me-shun* *ne-quid*
 likewise:TR Matses-ERG kill-CAUS-after:S/A>A TOSS-HAB
 ‘Similarly, after Matses make [the rice rat] get killed [with the deadfall trap], they throw [the rice rat] away.’ [?lit. ‘... Matses make [the trap] kill [the rice rat]...’] (A-IV 017 *tacbid umu* 05)

The difficulty in the preceding sentences is that if we consider them causative constructions, we have trouble determining who or what the causee is. Upon first glance, one may suppose that the traps are the causees, but what we find is that when the trap is mentioned explicitly, as in (28), the noun referring to the trap appears with instrumental marking, as opposed to appearing in the absolutive case, as overtly-stated causees do in all other causative constructions with *-me*.

- (28) a. *ad-en* *matses-n* *nēishamē-Ø* *pe-quid*
 do.thus-ADVZR:TR Matses-ERG tapir-ABS eat-HAB
tiantē-n *se-me-shun*
 bamboo-INST pierce-CAUS-after:S/A>A
 ‘Thus, Matses eat tapirs, after making them get pierced by a bamboo blade trap.’ (A-XIII 023 *nēishamē* *dectante* 10)

- b. *matses-n tiante-n nēishamë-Ø se-me-quid*
 Matses-ERG bamboo-INST tapir-ABS pierce-CAUS-HAB
 ‘Matses make tapirs get stabbed using bamboo blade traps.’
- c. **matses-n tiante-Ø nēishamë-Ø se-me-quid*
 Matses-ERG bamboo-ABS tapir-ABS pierce-CAUS-HAB
 (‘Matses cause tapirs to get stabbed with bamboo./Matses make the bamboo stab tapirs.’)

Example (28b) could be interpreted as a three-argument clause with a zero-pronominalized third person human causee, meaning something like, ‘Matses make (him/her/them) stab tapirs with bamboo.’ However, this would be an unusual situation, and the context in the text examples (26, 27 & 28a) makes it clear that no such human causee is involved. Similarly, the causee cannot be the tapir itself (as in, ‘Matses make the tapirs stab themselves’) because this would require the verb *se* ‘pierce’ to have a reflexive marker. Neither could the tapir be both the patient and the causer (as in ‘Tapirs let themselves get stabbed by bamboo traps, by Matses.’) because *nēishamë* ‘tapir’ does not take the ergative case marker. Another unacceptable interpretation is that in Matses inanimate causee arguments are marked with the instrumental postposition.⁵ This would be inconsistent with Matses grammar in that instruments are otherwise never core arguments, and instrumental postpositional phrases otherwise never zero-pronominalize. Thus, if one wishes to consider (26)–(28a) to be causative constructions, one must consider these exceptional in that they do not result in a valence increase.

This leads us to question whether sentences like (26)–(28a) are causative constructions at all. One method used to describe valence-increasing processes is to compare a derived construction to an “underlying” sentence containing an underived clause (Comrie 1976; Dixon 2000). The problem with this approach is that it can be circular: without an a priori assumption that a morpheme is a causative marker, there is no way to determine the identity of the arguments in the underlying clause. This is especially true in sentences that already contain a causative lexical verb, where the underlying clause would already have causative semantics. Take for example, (29a). If (29b) is its underlying clause, (29a) would not be a causativization of (29b) because (29b) already describes a causative event. To be a causativization, it would have to be derived from the interpretation where the bamboo is in the ergative case (the first translation in 29c), which would not be normal in Matses (note that Ergative and Instrumental markers are homophonous).

- (29) a. *matses-n (tiantē-n) nēishamë-Ø se-me-quid*
 Matses-ERG (bamboo-INST) tapir-ABS pierce-CAUS-HAB
 ‘Matses cause tapirs to get stabbed (with bamboo traps).’

- b. *matses-n nēishamē-Ø se-quid*
 Matses-ERG tapir-ABS pierce-HAB
 ‘Matses stab tapirs.’
- c. *tiante-n nēishamē-Ø se-quid*
 bamboo-ERG/INST tapir-ABS pierce-HAB
 ?‘Bamboo [traps] stab tapirs.’
 ‘They stabs tapirs with bamboo [spears].’

If we compare (29a) and (29d), we find a minimal pair that seriously contests the analysis of *-me* as a causative marker in (29a).

- (29) d. *matses-n (tiante-n) nēishamē-Ø se-quid*
 Matses-ERG (bamboo-INST) tapir-ABS pierce-HAB
 ‘Matses stab tapirs with (with bamboo spears/*with bamboo traps).’

What *-me* seems to be coding in (29a), then, is that the event is an elaborate one, involving physical and/or temporal remoteness of the agent (the initiator of the event) from the result of the caused event. This is evident in that the Matses word *tiante* can refer to bamboo traps or to bamboo-head spears, and the former is appropriate with *-me* (29a) and the latter without *-me* (29d).⁶ The core/peripheral status of the argument *tiante* does not change in (29a), but semantically the status of the instrument is promoted from a tool that is used to help bring about a simple, focused transitive event, to an entity that is essential for linking a causing event and a temporally separated caused event. Furthermore, comparison of (29a) and (29d) shows that suffixation with *-me* does not necessarily result in an increase in valence. Thus, we find that *-me* does not always function syntactically or semantically as a causative.

We can contrast the functions of *-me* and the applicative *-shun* in terms of an action chain (Langacker 1987; Achard this volume). With *-shun*, a participant is added at the end of the action chain; with the causative function of *-me*, a participant is added at the beginning of the action chain; and with the “instrument promotion” function of *-me*, a participant is added in the middle of the action chain (Figure 2).

Simple transitive event:	Agent	→ Patient
Applicative (<i>-shun</i>):	Agent	→ Patient → Beneficiary/Maleficiary
Causative (<i>-me</i>):	CAUSER → Agent	→ Patient
Instrument promotion (<i>-me</i>):	Agent → Instrument	→ Patient

Figure 2. New participants (shown in bold) introduced into transitive events by *-shun* and *-me*

Syntactically, the applicative and the causative constructions are similar in that the introduced participant becomes a core argument of the clause, while with the instrument promotion construction, the instrument remains a peripheral argument – it just becomes semantically more prominent. What the two construction types with *-me* have in common is that the agent-patient interaction is portrayed as more complex, with either a causer taking responsibility for initiating the energy flow, or an instrument being introduced as an intermediary in the energy flow from the agent to patient. Despite its different syntactic effects, *-me* consistently codes event complexity centered around the causing event and the agent/causer. Thus we can contrast two causation types: i) *remote causation*, where the causer is spatially distant from the patient, and the causing event is temporally distant from the caused event; and ii) *focused causation*, where the causer and the patient (and therefore also the causee) are temporally and spatially proximate as are the causing and the caused events. Remote causation generally requires an intermediary (but not with *-anmēs*, Sec. 6.1) and is perhaps most prototypically accomplished with an agentive causee, where the volitionality of the causee easily allows for the separation between the caused event and the causing event (Shibatani 2001). But separation of the causing and the caused event can similarly be accomplished with an elaborate inanimate “causee,” like a trap. So, if causees and instruments can be semantically similar, and if instruments can be added to the middle of the action chain using *-me*, this leads us to question whether it is correct to analyze three-argument causative-of transitive constructions as always involving the addition of a causer, as opposed to the addition of a causee. One of the functions of *-me* could be to add a participant to the middle of the action chain, syntactically promoting animate causees, but not inanimate ones.

So there could be three ways in which *-me* adds participants to transitive events, as illustrated in Figure 3.

Causative (<i>-me</i>):	Causer → Causee → Patient
Causative (<i>-me</i>):	Causer → Causee → Patient
Instrument promotion (<i>-me</i>):	Agent → Instrument → Patient

Figure 3. Alternative schema of the functions of *-me* in adding new participants (shown in **bold**)

The issue here is that there seems to be no *a priori* reason to assume that function of *-me* is to always add a participant to the beginning of the action chain. “Instrument promotion” constructions seem to show clearly that this is not always the function of *-me*, so why can’t causees be newly added participants, too? The causee-introducing function of *-me* would be most applicable when the main goal of the causer is to affect the patient, rather than to get the causee to do something.

So there are two competing analyses of *-me*. The first analysis is to characterize *-me*'s basic function as coding causative events and its other function (semantic promotion of an instrument), as an extension of its causative meaning. The second possible characterization of the function of *-me* is that it codes "remoteness" in the flow of energy between the initiation of the event and the end (and therefore generally necessitating an additional participant). This would make *-me* consistent with its causative readings and its coding of permission, enablement, and prominence of an instrument. However, this would not explain the fact that *-me* sometimes codes direct causation, and so this would then have to be an extension of the meaning coded by *-me*. Both seem to be satisfactory analyses of *-me*, with the advantage the analysis of *-me* as coding "remoteness" associated with the agent being that it encompasses the meanings associated with *-me* more efficiently, and its disadvantage being that it is perhaps a more abstract notion.

3.6 Lexicalization of stems with *-me*

Some stems with *-me* could be said to be lexicalized, such as (30a), (31a) and (32a), considering their rather specific and idiosyncratic meaning, and that there are no other lexical roots for 'suckle', 'feed' or 'fish with hook and line'.

- (30) a. *chishme*
'suckle'
- b. *pia bata-Ø chish-me-o-sh*
cane sweet-ABS suck-CAUS-PAST-3
'She made/let him suck sugarcane.'
- (31) a. *peme*
'feed'
- b. *opa-Ø pe-me-o-sh*
dog-ABS bite/eat-CAUS-PAST-3
'She fed the dog./She made the dog bite/eat him/it.'
'He (unintentionally) let the dog bite her.'
- (32) a. *anseme*
'hook-and-line fish'
- b. *tiante-n podo-Ø an-se-me-ta*
bamboo-INST arm-ABS inside-pierce-CAUS-IMPER
'Make the bamboo [blade of the trap] pierce the armpit.'

In the culturally relevant contexts (and usually also when context is lacking or ambiguous), the meanings in (30a), (31a) and (32a) obtain. Meanwhile, the same forms could also be interpreted in other contexts as more productive usages of *-me* (30b, 31 & 32b). Furthermore, we note that there are no irregular forms associated

with *-me*. So words like (30a), (31a), and (32a) appear to be in the process of obtaining lexical status, but presently these are not good examples of lexical causatives because they are not irregular or unproductive. An interesting pattern to note here is that the meanings that get lexicalized are not just the more culturally relevant ones, but also ones denoting focused causation.

There are no “cranberry morphemes” in forms containing *-me*; i.e., there are no lexicalized stems with *-me* that contain segments that do not occur elsewhere in the language. This observation, along with its formal regularity and high productivity, seems to indicate that *-me* is not a very old causative morpheme, sending one searching elsewhere for older causatives in the Matses language. The next section, which discusses a set of lexical causative verbs, including a set of roots with which *-me* cannot be used, may hold a clue to old causative morphology in Matses.

4. Lexical causative verbs

There are many verbs in Matses that can be analyzed as lexical causatives, i.e., transitive verbs that commit the speaker to the belief that a caused event has been realized after, and is wholly dependent on, the causing event expressed by the verb (Shibatani 1976). This can be illustrated with similar verbs like English *deceive* and Matses *muaua* ‘lie about/to,’ where the English verb entails that a caused event was brought about, while Matses verb expresses only an intention to do so. Here I call verbs like *muaua*, where the O is not a patient but an affected participant (usually a beneficiary or a maleficiary) “lexical applicatives” to contrast them with lexical causatives. Lexical causatives and lexical applicatives, as I define them, are identified based on the transitive verb’s own semantics, rather than their relationships to intransitive counterparts.

Many lexical causative and lexical applicative transitive verbs can be paired with intransitive counterparts. Lexical causatives described in this section exhibit one of the following four different syntactic relationships between the core arguments of the transitive verb and the single core argument of the intransitive verb:

- i. S = O causative/anticausative relationship (exx. 33–37)
- ii. S = A applicative/antipassive relationship (ex. 45)
- iii. S = A = O reflexive or reciprocal (ex. 38)
- iv. no co-reference (ex. 46c)

Thus, a causative relationship (i) is only one of several relationships that a lexical causative can have with an intransitive verb. “Lexical applicatives” could theoretically also exhibit all of these relationships with intransitive verbs, but I have not encountered them all in the language. As could be predicted from Shibatani and

Pardeshi's (this volume) observations, the most common transitive/intransitive verb pairs are lexical causatives with intransitive counterparts in a causative relationship (i), and a lexical applicatives with intransitive counterparts in an applicative relationship (ii). These most common types are illustrated in Figure 4, but it should be kept in mind that many of the other types of relationship do occur in the language. There are no transitive-ditransitive lexeme pairs in Matses.

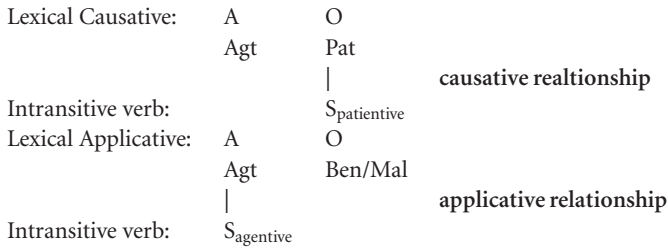


Figure 4. Syntactic relationship between the two most common types of verb pairs

In this paper, I will focus on lexical causative verbs with intransitive counterparts that are in a causative relationship. These verb pairs vary in their formal association: they may be: i) suppletive forms, i.e., semantically similar, but formally unrelated (33); ii) formally related, irregular, nonproductive forms with an obvious direction of derivation, be it a decrease (34) or increase (35) in valence; or iii) pairs that are formally related, but lack a clear direction of derivation and synchronically segmentable roots (36 & 37).

		Intransitive		Transitive
(33)	a.	<i>uëñës</i> 'die'		<i>ac</i> 'kill'
	b.	<i>cho</i> 'come'		<i>bë</i> 'bring'
	c.	<i>ue</i> 'lie'		<i>nan</i> 'lay'
(34)	a.	<i>naimëd</i> 'run out'		<i>nain</i> 'finish off'
	b.	<i>bishucud</i> 'peel'		<i>bishuc</i> 'skin, peel'
	c.	<i>cuëshëd</i> 'split with grain'		<i>cuësh</i> 'split with grain'
(35)	a.	<i>bëchish</i> 'get/be dirty'		<i>bëchishua</i> 'soil'
	b.	<i>tsëcpen</i> 'open'		<i>tsëcpenua</i> 'open'
	c.	<i>mais</i> 'fall and scatter'		<i>maisua</i> 'scatter throwing'
(36)	a.	<i>chiuid</i> 'spill (liquid)'		<i>chiuin</i> 'spill a liquid'
	b.	<i>bincud</i> 'roll'		<i>bincun</i> 'turn over'
	c.	<i>shoyod</i> 'stretch'		<i>shoyon</i> 'stretch'
(37)	a.	<i>didique</i> 'be hanging'		<i>didica</i> 'hang'
	b.	<i>poshque</i> 'come to have a hole'		<i>poshca</i> 'bore, pierce'
	c.	<i>shucque</i> 'fan oneself, sway'		<i>shucca</i> 'fan someone/fan a fire'

There are no “ambitransitive” verbs (Dixon 2000) in Matses, such as “labile” verbs (like English *break*, which exhibits a causative patterning, with transitive and *patientive* intransitive meanings; Payne 1997), or any other roots that can function as either transitive or intransitive (e.g., English *eat*, with transitive and *agentive* intransitive meanings, which exhibits a non-causative patterning; and English *cook*, with transitive and both agentive and patientive intransitive meanings). Yet, ergative case-marking, intra- and inter-clausal adverbial transitivity agreement, and an elaborate clause-chaining/switch reference system all require identification of the verb as transitive or intransitive. So speakers must pay special attention that the syntactic valence of the clause matches the valence of the verb, and they accomplish this by intransitive vs. transitive verb selection or valence modification (by reflexive/anticausative/passive, reciprocal, antipassive, causative and applicative valence-adjusting suffixes). It appears, from looking at (34)–(37), that in the recent past there was a productive system of valence-adjusting and/or transitive/intransitive verbal making. The result is a lexicon with many formally-related transitive/intransitive pairs, each exhibiting a somewhat different pattern. The different types of lexical-causative/intransitive verb pairs are discussed in the following subsections.

4.1 Anticausatives

Intransitive verbs that express an effect, which are derived from inherently causative simplex verbs, are sometimes called “anticausatives” (Comrie 1989: 168). The term “middle” is often used to describe verbs that express this type of notion, but “middle” is used to refer to too large a variety of meanings (Dixon and Aikhenvald 2000), while the verbs described in this section have a more restricted distribution of meanings: the S of the derived verb is co-referent with the O of a transitive counterpart that has a causative meaning. Lexicalized verb pairs exhibiting the opposite relationship, an antipassive relation (where the S of the derived verb is co-referent with the A of its transitive counterpart), do not seem to exist in Matses, although there is a productive antipassive marker, *-an*. The intransitive verbs in (34) all fit the anticausative pattern, but they are lexicalized, rather than products of a synchronic process. However, these forms are obviously related to productive usages of the detransitivizing suffix *-ad* (*-d* following vowels, *-ad* following consonants), which derives intransitive reflexives and anticausative verbs from transitive verbs (not just from inherently causative verbs), and is used to form *get*-passive type constructions. The examples in (34) are all irregular forms, perhaps reflecting morphophonological rules (vowel harmony and nasal labialization) that are no longer associated with the detransitivizer marker, while those in (38) are regular.

	Transitive		Intransitive: reflexive	anticausative
(38) a.	<i>tane</i> ‘tie’		<i>taniad</i> ‘tie oneself’	‘get tangled’
b.	<i>tantia</i> ‘listen/understand’	<i>tantiad</i>	‘hear oneself’	‘be understood’

In addition to their irregular form, one can identify anticausative lexicalized verbs because they never have a reflexive reading (where the S is co-referent with both the A and the O of the transitive verb), while productively-derived stems can have either anticausative or reflexive meanings if both meanings are logical for the verb in question. Thus, the forms in (34) are not prototypical instances of anticausatives because: i) the process is not restricted to deriving non-causative verbs from causative verbs; and ii) the process is not completely productive.

4.2 The irregular, unproductive transitivizer *-ua*

Another set of lexical causative verbs that shows an interesting pattern involves *ua* [wa] as in (35) and (39).

	Intransitive		Transitive
(39) a.	<i>uënës</i> ‘die’		<i>uënësua</i> ‘kill, make die, let die’
b.	<i>noad</i> ‘float’		<i>noadua</i> ‘make float’
c.	<i>uidën</i> ‘be securely in place’	<i>uidënu</i>	‘hold, fasten, immobilize’

The etymology of *-ua* seems fairly transparent, as there is a verb *ua* ‘make (out of)’, which follows nouns and adjectives in other constructions. The verb *ua* is not phonologically bound to nouns or adjectives, but, unlike all other verbs in Matses, its order in a sentence is fixed: it must directly follow a noun phrase or an adjective (40 & 41).

- (40) *aid-bi-Ø* *chotac-n* *shubu ua-e-c*
that.one-EMPH-ABS nonMatses-ERG house make-NPAST-INDIC
‘Non-Matses make houses out of those [fronds from a species of palm].’
- (41) *aton bacuë-Ø chu ua-shun* *chocueshca-shun*
3GEN fruit-ABS warm make-after:s/A>A mash-after:s/A>A
ac-quid
drink-HAB
‘After warming its fruits, after mashing them, they [Matses] drink it.’

Noun phrases that precede *ua*, which refer to the object that gets made, do not behave like core arguments, despite apparently being marked as absolutive participants (i.e., appearing as a bare nominal). Similarly, adjectives that precede *ua*, as in (41), are restricted in their position (right before *ua*), unlike adjective adjuncts in other constructions. What seems to be going on here is compounding without phonological attachment. The only productive use of *-ua* on verbs is in the process

of borrowing verbs from Spanish, where it does not seem to impart any additional meaning to the meaning of the Spanish verb (e.g., *bendeua* ‘sell’, from Sp. *vender*).

Another significant observation is that the meaning of lexical causatives with *ua* can refer to direct or indirect causation. For example, the verb *uidënua* ‘hold/fasten/immobilize’ (39c), can refer to a person directly holding something with his/her hands, as in (42), or to a more complex method of keeping something in place, as in (43). Similarly, the verb *uënësua* ‘kill, make/let die’ (39a) can refer to direct killing (that does not involve striking or shooting, e.g., choking) including blowing out a candle, or to remote and/or mysterious ways of making something or someone die, as in (44).

- (42) *bed-Ø cain-shun bed-Ø se-me-enda*
 grab-IMPER wait-after:s/A>A grab-IMPER pierce-CAUS-NEG.IMPER
pia uidënua-ta
 arrow hold-IMPER
 ‘Grab them! Grab them after waiting! Don’t let them shoot you! Hold (his) arrows!’ (K-XXI 010 dëmushbo 30)
- (43) *ad-shun-bi cuate-n uidënua-e-c ayash-Ø*
 do.thus-after:s/A>A-EMPH stick-INST hold-NPAST-INDIC vine.sp-ABS
tane-quin
 tie-while:s/A>A
 ‘Then, they secure the *ayash* vine in place with a stick, tying it.’ (G-XV 001 shëcten 21)
- (44) *yama cuëte-Ø uënësua-bud-ne-quid ne-e-c*
 climbing.rat dicot.tree-ABS kill-CONT-HAB-AGT.NZR be-NPAST-INDIC
 ‘The climbing rat is one that makes trees die.’ (A-IV 020 yama 03)

The range of indirect and direct meanings of *ua* forms, in light of the observation that indirect causation is generally associated with grammatical causatives, and direct causation with lexical causatives (Haiman 1983; Shibatani and Pardeshi this volume), seems to be consistent with the intermediate status of these verbs between suppletive lexical causatives and productive morphological causatives.

A final observation about verbs ending in *ua* is that they do not always express causation:

- | | Intransitive | | Transitive |
|---------|--------------------|----------------|---------------------------|
| (45) a. | <i>mua</i> ‘lie’ | <i>muaua</i> | ‘lie to or about someone’ |
| b. | <i>shubi</i> ‘cry’ | <i>shubiua</i> | ‘cry for someone’ |

The forms in (45) do not entail that a caused event has transpired, and their relationship to the intransitive verbs is one of “lexical applicative,” with the S of the intransitive verb being co-referent with the A of the transitive counterpart. (Mor-

phological causatives can be derived from *mua*, *shubi*, and any transitive or intransitive verb presented in this section using *-me*.) Therefore, we must conclude that *ua* was not specifically a causativizer, but a more general transitivizer. But it apparently did not transitivize randomly – there is a pattern: patientive intransitive verbs have causative counterparts (35 & 39) and agentive intransitive verbs have applicative counterparts (45). This is a pattern that has been recognized as a general one across languages (Shibatani and Pardeshi this volume).

4.3 Transitive-intransitive verb pairs ending in *n/d*

The verb pairs in (36) and (46) differ formally only in that the intransitive counterpart ends with *d*, and the transitive with *n*. However, these forms are not synchronically segmentable and there is no obvious direction of derivation. The *d* is reminiscent of the detransitivizer *-ad/-d* (Sec. 4.1), and *n* is a phonological segment that is associated with transitivity in Matses (*-n* is the Ergative case marker, *-en* marks transitive adverbial concord, etc.), but there is no synchronic process that would predict the forms in (36) and (46).

	Intransitive		Transitive
(46) a.	<i>ishcud</i>	‘swing’	<i>ishcun</i> ‘swing’
b.	<i>cuëd</i>	‘call out’	<i>cuën</i> ‘call to’
c.	<i>nibëd</i>	‘be missing’	<i>nibën</i> ‘search for’

The transitive verbs in (36) and (46a) are lexical causatives in that they express a causative event, and they are in a causative relationship with their formally-related intransitive verb: the O argument is co-referent with the S argument in the intransitive counterparts. However, transitive counterparts can also be “lexical applicatives,” as in (46b), or have a related meaning without a causative or applicative relation to the intransitive counterpart (46c). Thus, like with the verb pairs described in Sections 4.1 and 4.2, the relationship between the verb pairs is one of transitive/intransitive, rather than always causative/non-causative.

4.4 Transitive-intransitive verb pairs ending in *ca/que*; an instance of ablaut?

The verb pairs described in this section show a similar pattern to those in the preceding section in that they are formally similar and lack a clear direction of derivation: the intransitive counterparts end with *que* ([ke]), and the intransitive with *ca* ([ka]) (37 & 47).

	Intransitive		Transitive
(47) a.	<i>nique</i> ‘run off (plural S)’		<i>nica</i> ‘chase off, make run off (plural o)’
b.	<i>tadanque</i> ‘slip’		<i>tadanca</i> ‘cause to slip’
c.	<i>pichique</i> ‘be on fire, burn oneself’		<i>pichica</i> ‘burn something’

These forms are interesting in that the intransitive counterparts of the verb pairs (i.e., those that end in *que*) compose the only category of verbs that cannot be suffixed with the causative *-me* (48; cf. 49 & 50).

- (48) a. *shēctenamē-∅* *nique-o-sh*
white.lipped.peccary-ABS run.off:PL-PAST-3
‘White-lipped peccaries ran off.’
- b. **shēctenamē-∅* *nique-me-o-sh*
white.lipped.peccary-ABS run.off:PL-CAUS-PAST-3
‘(He made white-lipped peccaries run off.)’
- (49) a. *shēctenamē-∅* *nica-o-sh*
white.lipped.peccary-ABS chase.off:PL-PAST-3
‘He made white-lipped peccaries run off.’
- b. *shēctenamē-∅* *nica-me-o-sh*
white.lipped.peccary-ABS chase.off:PL-CAUS-PAST-3
‘He caused him to make the white-lipped peccaries run off.’
- (50) a. *shēctenamē-∅* *cuen-o-sh*
white.lipped.peccary-ABS run.off:SG-PAST-3
‘A white-lipped peccary ran off/passed by.’
- b. *shēctenamē-∅* *cuen-me-o-sh*
white.lipped.peccary-ABS run.off:SG-CAUS-PAST-3
‘He made a white-lipped peccary run off.’

As can be seen in (48a) and (49a), the transitive counterpart (the one ending with *ca*) can be the semantic causative of the *que* form. Nevertheless, the inability to suffix *-me* to verbs ending in *que* does not seem to be semantically motivated because other intransitive verbs that have transitive counterparts can be causativized with *-me* (51–54).

- (51) a. *uēnes-me* ‘let die/cause to die’
b. *cues* ‘kill’
- (52) a. *nain-me* ‘make/let/cause something to run out’
b. *nain* ‘finish off’
- (53) a. *bēchish-me* ‘make dirty/let something get dirty’
b. *bēchishua* ‘soil’

- (54) a. *chiuid-me* ‘let/cause some liquid to spill’
 c. *chiuin* ‘spill a liquid’

The restriction against using *-me* with verbs that end with *que* but not with other intransitive paired verbs does not seem to be based on a distinction between active vs. stative stems or agentive vs. patientive. This restriction appears to be associated with the wide range of direct and indirect meaning of verbs ending with *ca*, as opposed to other lexical causative that we have looked at. Contrasting the meanings of lexical causative and their *-me*-causativized intransitive counterparts in (51)–(54), it is evident that the meanings are partitioned in such a way that the lexical causatives code more direct causation, and morphological causatives code more indirect causation. The grammatical restriction of suffixing verbs ending in *que* precludes such a partitioning of meanings with *que/ca* verb pairs.

It is difficult to show that this exception to the use of *-me* is not phonologically motivated, since all verbs ending with *que* have a counterpart that ends with *ca*, so one cannot test whether it is the fact that the verb ends with *que* that prohibits suffixation with *-me*, or whether it is the existence of the transitive counterpart ending with *ca*. It does seem highly unlikely, however, that the [k] is involved in conditioning this restriction, considering that intransitive roots ending in [e] (but not [ke]) do take *-me* (e.g., 52a).

One might suspect that verbs ending with *ca* and *que* represent a derivational process where vowel change from *e* to *a* (i.e., “ablaut”) is a grammatical means of deriving a transitive verb from an intransitive verb (or vice-versa: a change from *a* to *e* being a process for detransitivizing verbs). This analysis is discouraged by the observation that no other derivational process in Matses uses ablaut, and that it is only following [k] in the final syllable that this vowel alternation would be possible. One motivation for analyzing this as a productive process is that it would provide an explanation for why the *que* forms cannot be causativized with *-me*: because verbs are causativized by ablaut or by suffixation, but not by both (an analysis similar to English past tense marking). But another objection to this analysis is that the alternation between *que* and *ca* cannot be called a synchronically productive means of **causativization**, because the transitive counterpart does not always have a causative meaning and its S of the intransitive counterpart is not always co-referent with the O of the transitive verb (55).

- | | Intransitive | | Transitive |
|---------|----------------------------------|--|--|
| (55) a. | <i>sedenque</i> ‘weep’ | | <i>sedenca</i> ‘weep for someone’ |
| b. | <i>onque</i> ‘talk’ | | <i>onca</i> ‘tease verbally, flirt’ |
| c. | <i>chushque</i> ‘complain, bark’ | | <i>chushca</i> ‘complain about someone, reprimand’ |

Unlike with the causative verb ending in *ua* described in Section 4.2, the causative vs. applicative relationship is not predictable from the agentive vs. patientive semantics of the intransitive verbs. The only pattern that seems to differentiate those intransitive verbs that have causative transitive counterparts with *ua* (37 & 47) and those that have applicative counterparts (55) is that those with applicative counterparts all refer to actions that are more naturally interpreted as communal or reciprocal human activities, and thus perhaps these intransitive verbs already suggest a notion of “sociative causation,” as described in Shibatani and Pardeshi (this volume). Their transitive applicative counterparts then serve to separate agents and patients as participating in different roles in the activity, rather than doing something together. The verbs that have causative counterparts, by contrast, refer to intransitive actions that are reflexive, anticausative, or non-communal actions and states.

A possible diachronic explanation for why verbs ending in *-que* cannot be suffixed with *-me* is that perhaps *-que* was an intransitive marker and *-ca* was a transitive marker, and that *-me* was incompatible with the intransitive marker since a causative would have to be at least bivalent. Another possibility is that *-que* and *-ca* were verbalizers, with the former creating intransitive verbs and the latter transitive verbs. I have not done any Panoan comparative work yet, so I can only speculate about such possibilities, but nevertheless it does seem likely that the absence of *-me* on verbs that end with *que* represents a relic from a past time when *que* and *ca* were segmentable and *-me* was beginning to be used broadly in the language. Whatever the history of these verb pairs might have been, it is difficult not to imagine a possible connection to the quotative verbs, *ca* and *que* introduced in the next section.

5. Expressing causation using *ca* ‘tell’

Matses does not have any analytic constructions (i.e., two-verb structures) that could be called “true” analytic (periphrastic/syntactic) causative constructions. The construction that most closely approximates a true analytic causative construction is direct quotation of imperative commands. Although these constructions are used regularly to convey causative situations, they cannot be considered real causative constructions because entailment of the completion of the caused event is not coded in the quotative verb, but rather is contingent upon cultural expectations based on kin relations. In other words, since these sentences do not commit the speaker to the belief that the order was carried out, these are not causative sentences (Shibatani 1976). However, the implication that the order was carried out seems to be stronger than in English, and, as discussed below in this section,

quotation is preferred to morphological causative constructions for relating some causative events, so these constructions deserve brief mention.

In Matses, all quotations are direct and must be made using one of two verbs: *que* ‘say [intransitive]’ and *ca* ‘tell/say to [transitive]’ (56); no other verbs that denote verbal communication (such as *chui* ‘tell/advise’) may function as quotatives.

- (56) a. *nid-nu que-o-sh*
 go-INTENT:1 say-PAST-3
 ‘S/he said, “I’m leaving.”’
 b. *nid-nu ca-o-sh*
 go-INTENT:1 tell-PAST-3
 ‘S/he told him/her, “I’m leaving.”’

When one quotes an imperative using *ca* (57 & 58), the interpretation can be similar to that of verbal causatives (causative interpretations are in parentheses).

- (57) *di nando-Ø ca-onda-sh mëdin-bo-n*
 hammock put.in-IMPER tell-DIST.PAST-3 deceased.person-COLL-ERG
 “Pack up your hammocks!” the now-deceased ones told them.
 (‘The now-deceased ones made them pack up their hammocks.’)
 (K-XXII 006 chema 058)

- (58) a. *na-Ø ca-o-sh*
 do-IMPER tell-PAST-3
 ‘S/he told him/her, “Do it!”’
 (‘S/he made/had him/her do it.’)
 b. *pe-ta ca-o-mbi*
 eat-EXCL.IMPER tell-PAST-1ERG
 ‘I told him/her, “Eat (without me)!”’
 (‘I made/had him/her eat [without me].’)
 c. *nid-enda ca-Ø*
 go-NEG.IMPER tell-IMPER
 ‘Tell him/her, “Don’t go!”’
 (‘Don’t let him/her go!’)

The meaning of this type of construction is always literal, i.e., quoted imperatives only code causative situations that actually involve verbal commands. Also, quotation of imperative commands can only be used with human causers and causees. Not even dogs, which do receive verbal commands from the Matses while hunting, can be “causees” in these constructions – in fact, (non-mythical) animals can never be the O of the verb *ca*.

Quotation of imperatives imply successful completion of the causative event only if the relationship between the two participants is such that the person being

spoken to is expected to perform the action. Among the Matses there are social obligations based on descent and kinship: children are generally expected to obey adults (all of whom are related to them through blood or marriage), and certain categories of kin are expected to perform certain activities for certain relatives. For example, Matses sons-in-law are obligated to help their father-in-law fell trees to make a swidden (Romanoff 1984). So in (59a), hearers will assume that Martha fetched the water, unless stated otherwise. But in (59b), on the other hand, the hearer would expect that Martha ignored Jonas or rapped him on the head for bothering her – but if she actually fetched the water for some reason, the speaker would be expected to say so (and explain why).

- (59) a. *madia-n madta-Ø acte-Ø ue-Ø ca-o-sh*
 Maria-ERG Martha-ABS water-ABS fetch-IMPER tell-PAST-3
 ‘Maria [Martha’s mother] told Martha to fetch water.’
 (‘Maria had/made Martha fetch water.’)
- b. *onas-n madta-Ø acte-Ø ue-Ø ca-o-sh*
 Jonas-ERG Martha-ABS water-ABS fetch-IMPER tell-PAST-3
 ‘Jonas [Martha’s younger bother] told Martha to fetch water.’

Despite the high level of expectation associated with a daughter obeying her mother, (59a) can be followed by ‘...but she refused to do it!’ without being semantically contradictory and without any grammatical consequences. Therefore, this construction does not entail that the caused event was carried out, providing evidence that these quotative constructions are not real causative sentences.

The type of notion expressed in (59a) could just as well be expressed using *-me* (60).

- (60) *madia-n madta-Ø acte-Ø ue-me-o-sh*
 Maria-ERG Martha-ABS water-ABS fetch-CAUS-PAST-3
 ‘Maria made/had/let Martha fetch water.’
 ‘Maria told Martha to fetch water.’

However, there are some restrictions to using (60) based on the Matses evidential system. The past tense verbal inflectional suffix *-o* in (59) and (60) simultaneously codes the evidential function of ‘Direct Experience’; and in the past tense evidentiality is obligatorily marked in Matses. So unless the speaker saw the whole event (in this case both Maria giving the order and Martha fetching the water), (60) cannot be used. In sentence (59), on the other hand *-o* only commits the speaker to having heard the command, and, because of the predictable behavior expected, it effectively conveys the whole event. There is no other brief way of reporting the action in (59a) if the speaker heard the command but did not directly witness the whole event. The suffixes that could be substituted for *-o* (*-ac* ‘Inferential’, *-accosh*

‘Inferential’ and *-ash* ‘Conjecture’) would all imply that the speaker is inferring or speculating both that the order was given and that the order was carried out.

If the speaker did see the whole event, s/he has a choice. Quoting an imperative instead of a morphological causative has the advantage of allowing the speaker to be more specific about the method of interpersonal manipulation (direct oral command), and to disambiguate causation from permission. Another explanation, one offered by a Matses speaker, is that it is more polite to use quotation for reporting such events. And, in fact, we find that when speakers were asked to translate reported actions using a Spanish causative construction like (61) into Matses, a quotation such as (62)⁷ was the normal response if they construed the action as involving social obligation and verbal command as the most likely mode of manipulating the causee. The corresponding causative construction with *-me* (63) was accepted, but “not the usual way to say it,” unless the situation involved physical force or permission rather than causation.

(61) *Hizo que cocine.*
‘S/he made him/her cook.’

(62) *codoca-Ø ca-o-sh*
COOK-IMPER tell-PAST-3
‘He told her to cook.’

(63) *codoca-me-o-sh*
COOK-CAUS-PAST-3
‘He made/had her cook.’

In summary, there are multiple factors that motivate reporting causation using quotation: i) politeness; ii) disambiguation between permission vs. causation and among possible means of effecting the event; iii) restrictions of the evidentiality system; iv) predictability of behavior based on a well-defined system of interpersonal obligation. But, constructions using *ca* do not entail causation and therefore cannot be considered causative constructions *per se*. As suggested by Tyler (2000), the notion of the inferability of causal relationships from sentences that do not contain causative elements are made frequently by drawing on cultural beliefs and patterns of cultural understanding. In light of this concept, it seems more accurate to describe the quotation of imperatives with *ca* in Matses as a construction type that lends itself well to the interpretation of a causative relation from context, while the construction itself does not code causation. These constructions are interesting in that: i) they give us a look at how cultural relationships affect the construal of interpersonal manipulation; and ii) they illustrate a verb that may be destined to become a causative marker (or a construction destined to become a causative construction)

if frequency of use leads to reanalyzing it as entailing completion of the caused event.

6. Causation in nominalizations

Nominalization is ubiquitous and highly developed in Matses. Nominalizations are accomplished via a large repertoire of nominalizers consisting of at least 18 suffixes, including an agent nominalizer (64), a patient nominalizer (65), two instrument nominalizers, 5 action nominalizers (for different tense-aspects), 4 general participant nominalizers (for different tense-aspects), 3 negative nominalizers (selecting different participants/aspects), an attributive nominalizer, and a causer nominalizer (the topic of Section 6.1).

- (64) [*capishto-chedo pe-**quid***] *sipi* *ne-e-c*
 cricket-etc eat-AGT.NZR tamarin be-NPAST-INDIC
 ‘Tamarins [squirrel-like monkeys] are ones that eat crickets and things like that.’ (A-IV 005 *sipi* 09)
- (65) *tsise* [*chotac-chedo-n pe-**aid***] *ne-e-c*
 coati non-Indian-etc-ERG eat-PAT.NZR be-NPAST-INDIC
 ‘Coatis are ones that are also eaten by non-Matses.’ (A-IV 028 *tsise* 17)
- (66) *adembidi matses-n achu-Ø* *pe-e-c*
 likewise:TR Matses-ERG howler.monkey-ABS eat-NPAST-INDIC
 ‘Also, Matses eat howler monkeys.’ (A-I 054 *achu* 23)

Nominalization is the basis of relativization in Matses, and copular sentences using verb nominalizations (64 & 65) are about as frequent as active constructions (66) in some text genre. Thus, an understanding of nominalizing morphology is central to obtaining insight into the language, and so in this section I will describe some of the different constructions that code causation in nominalizations in Matses.

6.1 Nominalizations using *-anmës* ‘Causer Nominalizer’

The nominalizing suffix *-anmës* is relevant to our study of Matses causation as its function is to exclusively code causative situations. However, it is not a prototypical causative morpheme in terms of its syntactic, semantic, or distributional properties. Syntactically, the locus of the causal relationship in nominalizations with *-anmës* is between the referent of the derived noun and the S or O of the original verb stem. In other words, as in (67) the suffix *-anmës* expresses causation by introducing a causer-causee relationship between a newly-introduced participant (the

referent of the newly-created noun) and a generalized patientive participant (the absolutive argument of original verb).

- (67) *podoto tsipis-anmës ne-e-c*
 bean fart-CAUSER.NZR be-NPAST-INDIC
 ‘Beans are ones that make [people] flatulent.’

Semantically, in addition to coding a causal relation, an effect of nominalization with *-anmës* is that if the original verb codes a punctual event (e.g., to fart) the meaning of the caused effect becomes one of being in a state (e.g., being flatulent) rather than referring to a single instance of the event. Also, the S/O of the original verb becomes generalized, as in antipassive constructions (Cooreman 1994), and is not stated overtly in the nominalized phrase; the affected body part of the affectee may, however, be mentioned explicitly in the noun phrase.

The number of verbs to which *-anmës* can be attached is very small: from a list of 400 verb roots, only 12 (3%) were accepted by Matses as nominalizable using *-anmës*. Table 1 lists the nouns derived from these 12 verb roots plus 7 other nouns with *-anmës* which were encountered by other means.

Table 1. Summary of all *-anmës* nominalizations found in this study

Lexemes that are names or parts of names of plants, animals or illnesses:

- | | | | |
|----|--------------------------|---------------------------------|---|
| 1. | <i>shëc-maocud-anmës</i> | tooth-fall.out -CAUS.NZR | ‘one that causes teeth to fall out’ (palm) |
| 2. | <i>dachi-anmës</i> | curse.to.die -CAUS.NZR | ‘one that causes a future death’ (palm tree) |
| 3. | <i>iquen-anmës</i> | feel.cold -CAUS.NZR | ‘one that causes chills’ (fish) |
| 4. | <i>pocca-anmës</i> | inflate -CAUS.NZR | ‘one that causes one’s belly to swell’ (fish) |
| 5. | <i>dësbu-anmës</i> | get.pimples -CAUS.NZR | ‘one that causes pimples’ (fish) |
| 6. | <i>basen-anmës</i> | have.pain -CAUS.NZR | ‘one that causes abdominal pains’ (disease) |
| 7. | <i>occasad-anmës</i> | have.nausea -CAUS.NZR | ‘one that causes nausea’ (plant) |
| 8. | <i>bëshu-anmës</i> | become.blind -CAUS.NZR | ‘one that causes bad vision’ (plant) |

Nominalizations that are lexicalized words, but not names:

- | | | | |
|-----|---------------------|---------------------------|------------------------------------|
| 9. | <i>nën-anmës</i> | hurt -CAUS.NZR | ‘one that causes one’s X to hurt’ |
| 10. | <i>casen-anmës</i> | get.thin -CAUS.NZR | ‘one that causes one to get thin’ |
| 11. | <i>cuid-anmës</i> | enchant -CAUS.NZR | ‘one that causes one to get sick’ |
| 12. | <i>maocud-anmës</i> | fall.out -CAUS.NZR | ‘one that causes hair to fall out’ |
| 13. | <i>tsipis-anmës</i> | fart -CAUS.NZR | ‘one that causes flatulence’ |
| 14. | <i>uënës-anmës</i> | die -CAUS.NZR | ‘one that causes death’ |

Nominalizations that are grammatically acceptable but not lexemes:

- | | | | |
|-----|------------------------|------------------------------|--|
| 15. | <i>bëun-anmës</i> | tear -CAUS.NZR | ‘one that causes one’s eyes to tear up’ |
| 16. | <i>pien-anmës</i> | diarrhea -CAUS.NZR | ‘one that causes diarrhea’ |
| 17. | <i>isun-anmës</i> | urinate -CAUS.NZR | ‘one that causes uncontrollable urination’ |
| 18. | <i>bishuccud-anmës</i> | peel -CAUS.NZR | ‘one that causes one’s skin to peel’ |
| 19. | <i>ushcas-anmës</i> | feel.sleepy -CAUS.NZR | ‘one that causes sleepiness’ |

The most unusual aspect of *-anmës* is that it only codes events that involve causal relations that people from Western societies would consider impossible (and might call irrational, superstitious or naïve). And only those situations that meet the following five requirements can be referred to by nominalization with *-anmës*:

- i. the state must be brought about non-volitionally
- ii. the verb must specify a state/event over which humans have no direct control
- iii. the event must involve entering an enduring state, even if the verb is an action verb
- iv. the effect must be undesirable
- v. the event must be brought on indirectly, by a remote, often mysterious cause

It should be noted that there was little debate as to the grammaticality of the plant/animal names and lexicalized terms in Table 1, but there was much disagreement about what novel nominalizations with *-anmës* should be possible. Nevertheless, the explanations given by the Matses for rejecting some nominalizations and accepting others provided considerable insight for the principles restricting the set of verbs that could be suffixed with *-anmës*. For example, requirement (i) can be illustrated by comparing the applicability of the term *eshë nën-anmës* ‘eye hurt-Causer.Nominalizer’ to different entities. If a person accidentally looks directly at a small species of bird called *acte chochon* as it is perching in a waterside bush or otherwise going about its business, a person will wake up the next day with a sore eye. The *ëu* ant is a tiny red ant that according to Matses, bites people in the inner corner of their eye during the night, making them wake up in the morning with a sore eye. Matses speakers tell us that the *ëu* ant cannot be referred to as *ëshë në-nanmës* because the *ëu* ant bites a person on purpose, but it is applicable to the *acte chochon* bird because the bird has no interest in hurting a person. This implies that a restriction on the use of *-anmës* is that the causer must not be volitional with respect to the change in state undergone by the experiencer, even if it is an animate entity that is capable of performing other actions volitionally. Requirement (ii) can be illustrated by fact that the Matses reject **shubi-anmës* (‘one that makes one cry’), but accept *bëunanmës* ‘one that makes one’s eyes tear up’. Matses speakers’ justification for this was that one is expected to be able to control crying, but the watering of one’s eyes is beyond one’s control. Even the word *dacuëd* ‘be scared’ cannot be nominalized with *-anmës* because the Matses believe that one can control fear, and so it does not make sense to say **dacuëd-anmës*. This requirement seems to respond not to whether one can actually control the action, but rather to whether the speaker believes that one should ideally have control over the action. This is a case in point of Malle’s (this volume) warning that one must consider a society’s folk theories in analyzing linguistic categories, rather than using one’s own understanding of physics, physiology, psychology, philosophy, etc. as informed by Western science or Western folk models. The requirement that all usages of *-anmës*

involve remote causation is taken to such an extreme that the causing action is always invisible and often mysterious. For example, **dauebud-anmës* (cool.down-Causer.Nominalizer) could not be used to refer to a fan, because the fan was “right there,” while *iquen-anmës* (feel.cold-Causer.Nominalizer) is the common name of a fish that can make you have chills for several months after accidentally touching it or looking at it. So, because contactive or obvious/visible cause-effect relationships are excluded, to use *-anmës*, the (invisible) cause-and-effect relation will be obvious to the hearer only if it involves a shared cultural belief.

From the list of verbs nominalizable with *-anmës* (Table 1), and those not nominalizable (including those mentioned in the preceding paragraphs) it is evident that distinctions such as active vs. inactive, agentive vs. patientive or other readily recognized verb categorizations cannot predict which verbs may be used with *-anmës*. Similarly, no simple dichotomy of causative events can predict what event types may be coded with *-anmës*. What all the nominalizations with *-anmës* seem to have in common seems to only be describable in terms of a rather complex set of variables, with a definition of the specific function of *-anmës* reading something like: “the referent of the nominalization is one that non-volitionally, indirectly and often mysteriously causes helpless victims to enter an undesirable, enduring state.” A more abstract reading of *-anmës* is that it codes “remote” causation: the cause and effect are temporally and/or spatially distant, the causer appears to have no interest in its victim, control and understanding of the causation event are not accessible to affected participants. The interesting thing about the way remoteness is coded by *-anmës* is that, in contrast to situations coded by *-me* (Sec. 3.5), the causal relations coded by *-anmës* do not require an intermediary participant or force for the causal event and the resulting event to be spatially and temporally distant. It is this culture-specific notion of unmediated remote causation that makes the causal attributions coded by *-anmës* nominalizations seem odd or implausible to Westerners.

6.2 Causer nominalizations with *-me-quid* ‘Causative-Agent Nominalizer’

Perhaps after reading the preceding section the reader has become curious as to how one would express the notions that are not conveyable by nominalization with *-anmës*; fortunately, Matses speakers provided this information by offering corrections when they rejected nominalization attempts with *-anmës*. It is possible to derive nouns similar in meaning to those derived using *-anmës* by using the more widely-applicable nominalizing suffix *-quid* ‘Agent nominalizer,’ which is attached to any verb stem to create a noun that refers to the A or S argument of a present habitual or future event, or the A of a past event. In transitive verbs like *cuid* ‘enchant/make sick,’ there is already an A and an O, and so nominaliza-

tion with *-quid* can derive a noun with semantics similar to nominalizations with *-anmës* (68 and 69).

- (68) (*bacuë-bo-Ø*) *cuid-quid* *batachoed ne-e-c*
 child-COLL-ABS enchant-AGT.NZR tayra be-NPAST-INDIC
 ‘Tayras [mink-like mammals] are ones that enchant them/(children).’
 ‘The tayra is the one that enchanted them/(the children).’
- (69) (**bacuë-bo-Ø*) *cuid-anmës* *batachoed ne-e-c*
 child-COLL-ABS enchant-CAUSER.NZR tayra be-NPAST-INDIC
 ‘Tayras are ones that enchant (*children).’
 *‘The tayra is the one that enchanted (the children).’

However, nominalization with *-quid* does not entail causation with intransitive verbs or transitive verbs that do not already express a causative situation.

For intransitive stems, one needs to use a combination of suffixes to produce a noun that entails a causal relationship. One of these combinations is the sequence *-me* ‘Causative’ followed by *-quid* ‘Agent Nominalizer’, where the valence of the verb is first increased and then the category of the constituent is changed to “noun.” The derived nominal may be a single word or a relative clause that includes an O and/or an adverbial (recall that nominalization is the basis of relativization in Matses). In these nominalizations, the causer is the referent of the noun, and the O of the verb stem becomes a causee that is either stated overtly or zero-pronominalized (70).

- (70) (*bacuë-bo-Ø*) *mamën-me-quid*
 child-COLL-ABS laugh/smile/play-CAUS-AGT.NZR
 ‘One that makes them/(children) laugh/smile/play.’
 ‘The one that made them (the children) laugh/smile/play.’

Because of the wide range of meanings associated with *-me* (Sec. 6.1), and the general applicability of *-me* and *-quid*, this combination of suffixes can be used with any verb (transitive or intransitive) to point to any sort of causer of almost any type of causation event. The only limitation is that when *-anmës* is applicable to the situation, nominalization with *-anmës* is preferred over *-me-quid*.

The differences between nominalizations with *-quid/-me-quid* and *-anmës*, are: i) with *-quid*, the patient (the O of the verb stem) must either be stated overtly within the relative clause or be identifiable (i.e., be the referent of the zero-pronoun), while with *-anmës* the patient cannot be stated directly and is generic; ii) the use of *-anmës* has the five restrictions listed in Section 6.1, while *-quid* appears to have no restriction other than that the referents of the core arguments be identifiable; and additionally iii) the referents of nominalizations with *-quid* are usually people or animals, while with *-anmës* the referent is never a person.

6.3 Causer nominalizations with *-an-*quid** ‘Antipassive-Agent Nominalizer’

The next suffix sequence that creates nouns entailing causation is the suffix *-an* ‘Antipassive/Inceptive/Inchoative,’ which is a rather complex morpheme that calls for a brief introduction. The function of *-an* when used with intransitive stems appears quite different from its function when used with transitive stems, but these functions are relatable, with more than simple homophony at work here. With intransitive stems, *-an* may have an inceptive (71) or inchoative meaning (72). But with transitive verbs it has an antipassive function, with the ergative participant becoming absolutive, and the original O becoming generic and (usually) unspecified (73).⁸

- (71) *cuesban-Ø inchësh-n natia-mbo-shë mamën-an-e-c*
 bat-ABS dark-LOC many-AUG-AUG laugh-INCEP-NPAST-INDIC
 ‘At night, bats begin laughing loudly.’ (A-I 051 cuesban 03)
- (72) *bescan-an-e-c*
 sweep-INCEP-NPAST-INDIC
 ‘S/he is able to sweep now.’ [e.g., a little girl or a sick person]
- (73) *abitedi-shun pe-an-e-c achu camun-Ø*
 all-TR eat-ANTPASS-NPAST-INDIC howler.monkey jaguar-ABS
 ‘Bush dogs [lit. “howler monkey-jaguars”] eat together as a pack.’
 (A-IV 035 achu camun 14)

The transitive and intransitive functions of *-an* are related in that they both break up the event and either (in the antipassive function) focus on agent by peripheralizing the object, or focus (in the inceptive/inchoative function) on the initiation of the event while peripheralizing the conclusion. Using DeLancey’s (1982) terminology, both the voice and the aspect functions of *-an* are associated with the an onset viewpoint.

When *-an* is combined with *-quid*, inchoative, antipassive, and causative meanings all result. For example, (75) expresses a causative situation where a generic/unidentifiable patient is caused to enter into a state.

- (75) *tsipis-an-quid*
 fart-ANTPASS-AGT.NZR
 ‘one that causes [people] to become flatulent’

This causative-antipassive-inchoative meaning is only present with a restricted number of verbs. With transitive verbs (76) and most intransitive verbs (77), this same sequence of morphemes does not introduce a causative meaning into the nominalization.

- (76) *buid bitacca-an-quid* *buid ne-e-c*
pitch stick-ANTPASS-AGT.NZR pitch be-NPAST-INDIC
‘Pitch... pitch is one that glues.’ (A-XIII 001 buid 03)
- (77) *titique-an-quid*
run-INCEP-AGT.NZR
‘one that always starts running’

But the number of verbs where *-an-quid* has a causative meaning is greater than the number of verbs that can occur with *-anmës*. This list includes the same set of verbs that can occur with *-anmës* and a several more. For example, reference to a rough-barked liana that scrapes people as they pass by in the forest using **chëshöd-anmës* was rejected and corrected with (78).

- (78) *chëshöd-an-quid*
scrape.oneself-ANTPASS-AGT.NZR
‘one that makes one scrape oneself’

There are several other differences between nominalization with *-anmës* vs. *-an-quid*.⁹ Unlike *-anmës*, *-an-quid* may refer to humans or animals that volitionally cause a change in state. For example, *tsipis-an-quid* (fart-Antipassive-Agent Nominalizer) could be used to refer to (flatulence-inducing) swamp palm fruits or the person who fed them to you, while *tsipis-anmës* could refer only to the palm fruits. We also note that there are no lexemes in Matses formed with *-an-quid* and that the causative nominalizations with *-an-quid* always refer to a specific, definite referent, and may refer to a specific or generic event and patient. By

Table 2. Comparison of properties associated with three nominalizers used to code causation

	<i>-me-quid</i>	<i>-an-quid</i>	<i>-anmës</i>
referent of noun			
– entity type	person/animal	person/animal/thing	animal/thing
– identity	specific	specific	specific/generic
patient			
– syntactic status	overt NP or pronoun	not mentionable	not mentionable
– entity type	person/animal/thing	person/animal/thing	person
– identity	specific/generic	specific/generic	generic
causation event			
– interaction	contactive/distant	contactive/distant	distant
– volition	yes	yes/no	no
– caused event	event/state	state	state
– desirability	(un)desirable	(un)desirable	undesirable

contrast, nominalization with *-anmës* can have either specific, definite referents or general, indefinite referents, but the patients are always generic (this is summarized in Table 2).

7. Conclusions

The properties of causative nominalization constructions, as shown in Table 2, could be described as continua, with nominalizations with *-me-quid* at one extreme, with *-anmës* at the other extreme, and with *-an-quid* in some cases standing in between or aligned with either *-me-quid* or *-anmës*. A way to summarize these properties is by noting that those associated with *-me-quid* code focused interactions between the causer and the causee/patient, and those with *-anmës* code remote interactions (see Sec. 3.5 for definitions of focused and remote causation). Focused causation shares characteristics with direct causation and remote causation shares characteristics with indirect causation. Figure 5 illustrates this continuum:

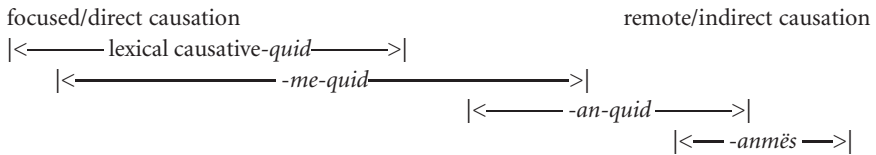


Figure 5. Continuum of causation types coded in nominalization constructions

Two unexpected findings are illustrated by Figure 5. The first is that the focused/direct-remote/indirect causation continuum is played out more elaborately in nominalization constructions than with active verb causation constructions (cf. Figure 6).

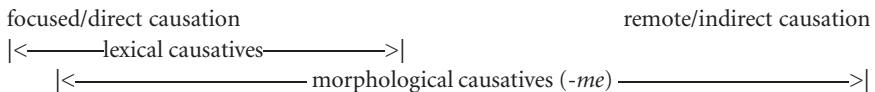


Figure 6. Continuum of causation types coded in active clause constructions

The second interesting point illustrated in Figure 5 is that, excluding nominalizations of lexical causatives, the morphologically most simple causative nominalization construction type is accomplished by *-anmës*, while those coding more direct causation are morphologically more complex – this is the opposite of the expected “iconic” association between direct causation and causation constructions

exhibiting less grammatical material (Haiman 1983). Similarly, this pattern would not be predicted by the observed generalization that prototypical causation is associated with grammatically simpler causative constructions (Lakoff 1977, 1987). Taking the nominalization of lexical causatives into consideration, we find in Figure 5 that for causer nominalization constructions, there are two grammatically simplest forms. This suggests that perhaps the Matses do not consider all types of causation as a single category, and therefore there is more than one prototype for causative notions. What we note about both nominalization of lexical causatives and nominalization with *-anmēs* is that both constructions tend to code causative events without an intermediary, so, in a sense, the generally-observed association of direct causation and grammatically simpler constructions is not violated.

Notes

* First and foremost I would like to thank the Matses at Nuevo San Juan for helping me to understand causative constructions in their language. Without their patience and hospitality this study would not have been possible. Funding was provided by the Rice University Department of Linguistics Summer Research Grant. Philip Davis, Spike Gildea, Douglas Mitchell and Masayoshi Shibatani provided helpful comments on earlier drafts of this paper.

1. The Matses (formerly known as Mayoruna) are an indigenous Amazonian group consisting of about 1500 persons living along the Yavari (Javari) River and its tributaries in Peru and Brazil. They made first peaceful contact with the national culture in 1969. The majority of the Matses continue to meet all their nutritional needs through traditional subsistence activities and about 85% are still essentially monolingual. The group of Matses from whom I learned the details of causative constructions presented in this paper are from the Matses village of Nuevo San Juan, on the Gálvez River in Peru. Nuevo San Juan has a total population of 43 persons, all of whom are related by blood or marriage. See Erikson (1994) and Romanoff (1984) for information on Matses culture and history.

2. The orthography used here is the practical orthography developed by SIL personnel for Bible translation and pedagogical materials, which is the only writing system used by Matses. The alphabet is phonemically-based and modeled after Spanish orthography. To produce a pronunciation that approximates Matses, words written in this orthography can be pronounced as if reading Spanish, with the following exceptions: *ē* is a high central unrounded vowel [i]; *c* (spelled *qu* preceding *e*, *ē* and *i*) is pronounced as a glottal stop word-finally and preceding consonants, and as [k] elsewhere; *d* is pronounced as a flap between vowels, and as a [d] elsewhere; and *ts* should be read as an unvoiced alveolar affricate. Word-level stress is on even-numbered syllables (counting left to right).

Examples from texts are followed by sentence index numbers, elicited and overheard sentences are not.

Note that the third person ergative and absolutive pronouns (singular and plural, masculine and feminine) are \emptyset , and are absent in the text and gloss lines, but I have included them in the free translations as pronouns or, in square brackets, as noun phrases.

3. The formal similarity between *mene* ‘give’ and *-me* ‘Causative’ is hard to ignore in light of Kemmer and Verhagen’s (1994: 129) observation that, “In some languages, the causative marker is synchronically or diachronically the word for ‘give.’”
4. I have no text examples of causativized ditransitive roots or iterative applications of *-me*, but elicited sentences like (12) and (13) are quickly accepted. Sentences using the same verb words with all 4 participants mentioned explicitly are more objectionable, but the only acceptable way of constructing them seems to be with one ergative and 3 absolutive-marked participants. The fact that all participants may be zero-pronominalized, however, is an indication that none of the participants are peripheral, as zero-pronominalization is a property restricted to third person core arguments.
5. These constructions are not parallel to those causative constructions in Hindi and Kananda described, respectively, in Saksena (1980) and Cole (1983) in that human causees in Matses are never marked with the instrumental suffix.
6. The Matses have two common ways of killing tapirs (a donkey-sized mammal). One is to set a spring-loaded trap where a sharp piece of bamboo tied to a sapling is released when a tapir steps across the trip-wire. These traps are set far from the village in mineral licks and checked about once every three days. The other way is to chase tapirs down with dogs. If the dogs follow the tapir closely enough, the tapir will try to take refuge from the dogs by submerging itself in a small stream. When the hunters catch up, they kill the tapir with bamboo-head or palm wood spears by stabbing it while it is still submerged or as it tries to run out of the stream bed.
7. Note that while Spanish and Matses can be neutral for gender in these sentences, English cannot. So pronouns in these English translations reflect Matses speakers’ explanations of their interpretations the event.
8. In past perfective tense-aspects, the peripheralized O is usually interpreted as the first person rather than a general/unidentified participant:

opa-Ø pi-an-o-sh
 dog-ABS bite-Antipass-PAST-3
 ‘The dog bit me.’

9. The suffix *-an* on intransitive stems does not increase the syntactic valence of a verb in other environments (cf. 71 & 72). So from where do the causative semantics emerge in *-an-quid* constructions? One could perhaps argue that a composite meaning arises from the specification that a state is being entered into (indicated by the inceptive/inchoative *-an*) and that an agentive argument is involved (indicated by the agent nominalizer *-quid*), the implication being that one argument is causing a second argument to enter into a state. Although historical speculation is not a substitute for synchronic explanations, it is interesting to note the similarity in form between *-an-quid* and *-anmës*. Although there is no segmentable morpheme in Matses like *-mës*, the presence of *an* in *-anmës* leads one to question whether the origin of *-anmës* involved the inceptive/antipassive *-an*. In Shipibo-Konibo, another Panoan language, there exists a morpheme *-mis*, which appears to be an A nominalizer, or an agent nominalizer [Valenzuela, personal communication]. So, it seems possible that *-anmës* became grammaticalized to from the frequent combination of *-an* and an agent nominalizer that had a form like *-mës*. I also note that some speakers pronounce some of

the words with *anmës* as *uanmës* and *anquid* as *uanquid*, this initial *u* ([w]) may be related to the non-productive transitivizing suffix *-ua* described in Section 4.2. But this could only be an etymological analysis, since *-ua* cannot be suffixed productively on verbs in the modern language.

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Causativization and transitivity in Shipibo-Konibo

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1. Introduction

Languages encode various types of causation. Prototypical causation has been defined as a cluster of interactional properties,¹ and the different types of causation as deviations from the prototype. A central instance of causation is a process in which a prototypical agent directly affects a perceptible change of state in a prototypical patient, and the affectation and subsequent effect are conceptualized as a single event² (Lakoff 1987:55; Lemmens 1998:21). Furthermore, in a central instance of causation the “agent is looking at the patient” and perceives the change (Lakoff *ibid.*:55). Verbs such as ‘hit’, ‘kill’, and ‘break’ are cited as good exemplars, although in these cases the notion of causation is inherent or “sublexical” in the sense that it is not coded separately from the result event (Langacker 1991:408, see also Lemmens *ibid.*:27).

Within different linguistic frameworks (e.g., Transformational Grammar, Generative Semantics, Relational Grammar, Incorporation-Government & Binding Theory, Lexical-Functional Grammar, etc.) causative constructions have been characterized as derived structures resulting from the combination (and reduction) of two or more underlying syntactic or semantic units (Baker 1988:154; see also Kemmer & Verhagen 1994:115–116; Dixon 2000:30).³ Kemmer & Verhagen (1994), on the other hand, see causative constructions as structurally and conceptually modeled on simple constructions, as extensions or elaborations of non-causative clauses; namely, two-participant clauses, and three-participant clauses of the ditransitive or transitive plus instrumental complement types.⁴ Consequently, the case-marking alternations commonly found in causative constructions are seen as systematically related to the semantics of case-marking in noncausative clauses.⁵

This paper investigates causative constructions in Shipibo-Konibo, a Panoan language spoken by approximately 30,000 people in the Peruvian Amazon.⁶ As I will show, SK exhibits interesting characteristics, especially regarding the interplay between causative constructions and transitivity-related phenomena. It is also the aim of this paper to explore how current conceptual frameworks dealing with causation, in particular functionalist-cognitivist approaches, account for the phenomena found in SK, and vice versa; i.e., how the facts of SK grammar can contribute to a better understanding of causation and the ways it is encoded in language.

In Section 2, I introduce selected features of SK grammar that are relevant for the subsequent discussion; namely, alignment type and the expression of arguments, syntactic categories with predicative functions, adverbial transitivity agreement and switch-reference. In addition to this, 2.3.3 briefly deals with the interclausal coding of causal relations. Section 3 describes the causativization strategies available in the language, their distribution, and the way they interact with transitivity and switch-reference. In Section 4, I discuss semantic distinctions of causative constructions, especially the use of alternate means to express direct and indirect causation situations. Section 5 treats the interplay between the different scopes of adverbials and transitivity. Finally, Section 6 summarizes the conclusions of the present study.

2. Features of Shipibo-Konibo grammar

Typologically, SK can be characterized as a predominantly agglutinative⁷ language, with suffixes, enclitics, and postpositions (except for a closed set of bodypart prefixes, exx. (2), (5), (24), (31), (52), and (93)), and a basic but quite flexible AOV/SV order.

In terms of alignment, SK exhibits a fairly rigid ergative-absolutive case-marking system. Unlike what is most commonly found in languages of this type (Dixon 1994:83–104), including those of the Panoan family, it can be said that in SK there are no instances of case-marking splits triggered by the inherent semantics of the noun phrase, tense-aspect-modality distinctions, or the syntactic status of the clause. The ergative case is marked by the clitic *-n*, while the absolutive remains unmarked. Besides having several morphophonologically-conditioned alternate forms, *-n* illustrates an interesting instance of case syncretism. In SK, *-n* is attached to the last element of the corresponding noun phrase to code the ergative, genitive, instrumental, and other oblique functions such as locative-allative and temporal. While it is the only means to mark the ergative, genitive, and instrumental cases, there are alternative ways to mark the locative-allative and temporal functions (Valenzuela 1998).

It has been claimed that Amazonian languages tend to be head-marking and polysynthetic (Derbyshire & Pullum 1986: 19; Dixon & Aikhenvald 1999: 8). More particularly, it has been mentioned that Western Amazonian languages tend to be polysynthetic, as opposed to Eastern Amazonian languages which are comparatively more isolating (Payne 1990: 214). SK, despite being a Western Amazonian language, does not fit into these characterizations, since there is no coreferential marking of arguments on the verb or auxiliary (except for partially optional plural number, see examples (19) and (20)). On the other hand, SK does support a second proposed feature of Amazonian languages regarding the absence of voice mechanisms of the canonical sort such as agentive passive (Derbyshire & Pullum 1986: 19) and antipassive (Dixon & Aikhenvald 1999: xxvii).

2.1 Alignment and expression of arguments

The semantic definition of prototypical causation included in the introduction could be easily used to characterize prototypical transitive events (cf. Givón 1984: 20–21, 96–97; Givón 1995: 75). Although the exact relationship between causation and transitivity is by no means a consensual matter (cf. Shibatani 1976: 2; DeLancey 1984; Croft 1991; Kemmer & Verhagen 1994: 127), it seems obvious that prototypical transitive agents are causers (Givón 1984: 107–108; DeLancey 1984).⁸ On the other hand, ergative-absolutive alignments (and one could add ergative-absolutive case-marking systems, especially), have been said to reflect more directly the actual semantic relations of prototypical transitive events (Lazard 1998: 249). Since prototypical transitive events are closely associated to causality, fairly consistent ergative systems such as the one found in SK can be viewed as explicitly and consistently highlighting the causer of all, lexical, morphological and syntactic transitive-causal expressions (see also Dixon 2000: 30).⁹ In more general terms, SK morphosyntax seems to be particularly sensitive to transitivity-causation.

Examples (1)–(4) illustrate the basic SV pattern of intransitive clauses,¹⁰ as well as the fact that the S_o and S_a arguments occur unmarked. Notice also in these sentences three different types of finite predicates: the copula *iki* in ex. (1), and verbs carrying either the incomplete aspect marker *-ai* as in (2) and (3), or the completive *-ke* as in (4):

Intransitive Inactive Clauses

- (1) Pena-ra kikin chikish-ma iki.
 Pena:ABS-EV very lazy-NEG COP
 ‘Pena is a very hardworker.’

- (2) Rama-ra ea xe-rabin-ai, yotokonti
 now-EV 1:ABS tooth-feel.embarrassed.about-INC *yotokonti*:ABS
 naka-yama-[a]x.
 chew-NEG-PSSI
 ‘Now I feel embarrassed about my teeth, for not having chewed *yotokonti*.’

Intransitive Active Clauses

- (3) Pena-ra sai ik-ai.
 Pena:ABS-EV cry.out.for.help-INC
 ‘Pena is crying out for help.’
- (4) Ea-ra jiwi bochiki nee-ke bonko meran jiki-i.
 1:ABS-EV tree up climb-COMPL foliage inside enter-SSSI
 ‘I climbed up the tree hiding in the foliage.’

Example (5) is an instance of the basic AOV order and, together with (6), illustrates the obligatory ergative case-marker *-n* on the A argument. Notice that the form *-n* also marks the genitive in (5):

Transitive Clauses

- (5) Pena-n-ra jawen bene-n koton pe-kewe ak-ai.
 Pena-ERG-EV POSS3 husband-GEN shirt:ABS back-embroider-INC
 ‘Pena is embroidering her husband’s shirt (on the back).’
- (6) E-n-ra be-a iki nocho jana rao,
 1-ERG-EV bring-PP2 AUX snail tongue medicine:ABS
 kachiokea.
 in.the.forest-ABL
 ‘I brought *nocho jana* (plant) medicine from the forest.’

In (6), a fourth type of finite predicate is found, the narrative past VERB-*a iki*.

In SK, omission of required subject or object refers to an understood element, generally a zero third person singular form (Valenzuela 1997:24–27). Consider examples (7)–(11):

- (7) Ja-n-ra ea jamá-ke.
 3-ERG-EV 1:ABS kick-INC
 ‘S/he kicked me.’
- (8) Ea-ra jamá-ke.
 1:ABS-EV kick-COMPL
 ‘S/he kicked me.’
- (9) E-n-ra ja jamá-ke.
 1-ERG-EV 3:ABS kick-COMPL
 ‘I kicked him/her/it.’

- (10) E-n-ra jamá-ke.
 1-ERG-EV kick-COMPL
 ‘I kicked (him/her/it).’

Sentence (10) indeed designates an individuated, definite pronominal ‘him/her/it,’ since it is a valid answer to the question:

- (11) Tso-n-ki nokon ochíti jamat-a?
 who-ERG-INT POSS1 dog:ABS kick-COMPL:INT
 ‘Who kicked my dog?’

So far, I have not been able to find any independent morphosyntactic basis for grammatically distinguishing direct from indirect objects. Thus, in a construction with a ditransitive verb such as *meni-* ‘give,’ both the patient and the recipient are marked absolutive. Furthermore, it is possible for both objects to exchange positions without undergoing any morphosyntactic change, as shown in (12a–b):

Ditransitive Clauses

- (12) a. Pena-n-ra bake-bo esé-bo meni-ai.
 Pena-ERG-EV child-PL:ABS advice-PL:ABS give-INC
 ‘Pena gives advice to the children.’
 b. Pena-n-ra esé-bo bake-bo meni-ai.
 Pena-ERG-EV advice-PL:ABS child-PL:ABS give-INC
 ‘Pena gives advice to the children.’

In addition of occurring unmarked, both objects can be relativized on:

- (13) Esé-bo Pena-n bake-bo meni-ai r-iki moa-tian
 advice-PL Pena-ERG child-PL:ABS give-PPL:ABS EV-COP already-TEMP
 no-n axé.
 1PL-GEN traditional.knowledge/custom
 ‘The advice that Pena gives the children is part of our traditional knowledge/custom.’
- (14) Bake-bo Pena-n esé-bo meni-ai r-iki jawen
 child-PL Pena-ERG advice-PL:ABS give-PPL:ABS EV-COP POSS3
 baba-bo.
 grandchild-PL
 ‘The children to whom Pena is giving advice are her grandchildren.’

The next sentence contains a causativized predicate and two human objects; notice that any of the absolutive-marked arguments can be interpreted as the causee (although given Shipibo customs the first interpretation is preferable):

- (15) Pena-n-ra ranon jawen xontako
 Pena-ERG-EV young.man:ABS POSS3 unmarried.girl:ABS
 bi-ma-ke.
 get-CAUS-COMPL
 'Pena married her daughter to the young man (lit. made her unmarried
 daughter get/receive the young man).
 /Pena married the young man to her daughter (lit. made the young man
 get/receive her unmarried daughter).'

Furthermore, both arguments can function as the object of an applicative such as the benefactive *-xon*:

- (16) Pena-n-ra xontako joni mera-xon-ke.
 Pena-ERG-EV unmarried.girl:ABS man:ABS find-BEN-COMPL
 'Pena found a man for the unmarried girl/Pena found an unmarried girl
 for the man.'

In one type of complex sentence, the marker *-a* is used to encode subsequent events where the object of a dependent clause is coreferential with the subject (i.e., S or A argument) of its matrix clause. When the dependent clause is ditransitive, either object, i.e., recipient or patient, can be selected for this process:

- (17) Pena-n bake meni-a-ra ainbo xobo-n
 Pena-ERG child:ABS give-PO>S/A-EV woman:ABS house-ALL
 ka-ke.
 go-COMPL
 'After Pena gave (her) the child, the woman went home.'
- (18) Pena-n ainbo meni-a-ra bake wini-ke.
 Pena-ERG woman:ABS give-PO>S/A-EV child:ABS cry-COMPL
 'After Pena gave (the child) to the woman, the child cried.'

Further analysis may unveil a syntactic characteristic with respect to which the objects of a ditransitive construction differ in a consistent manner (cf. Kozinsky & Polinsky 1993).

As mentioned above, and as can be observed in the preceding examples, in SK there is no marking of either subject or object on the verb. However, the verbal suffix *-kan* is required in clauses with an unexpressed third person plural subject; if the subject is overtly expressed, *-kan* remains optional. Examples (19a–c) below illustrate the different possible ways to express the equivalent of the English sentence 'They are sitting on the rush mat':

- (19) a. Ja-bo-ra pishiman yaká-ke.
 3-PL:ABS-EV rush.mat:LOC be.sitting-COMPL

- b. Ja-bo-ra pishiman yaká-kan-ke.
3-PL:ABS-EV rush.mat:LOC be.sitting-PL-COMPL
- c. Pishiman-ra yaká-kan-ke.
rush.mat:LOC-EV be.sitting-PL-COMPL
- d. *Pishiman-ra yaká-ke.
rush.mat:LOC-EV be.sitting-COMPL
'They are sitting on the rush mat.'

Examples (20a–c) show that *-kan* is governed in the nominative-accusative fashion, since it also agrees with the A argument of a transitive verb such as *osan-* 'laugh at':

- (20) a. Ja-baon-ra joni osan-ai.
3-PL:ERG-EV person:ABS laugh.at-INC
- b. Ja-baon-ra joni osan-kan-ai.
3-PL:ERG-EV person:ABS laugh.at-PL-INC
- c. Joni-ra osan-kan-ai.
person:ABS-EV laugh.at-PL-INC
'They are laughing at the man.'
- d. *Joni-ra osan-ai.
man:ABS-EV laugh.at-INC
'They are laughing at the man.'

(19d) and (20d) are ungrammatical sentences for the indicated English equivalents; but grammatical when bearing the meanings 'she/he/it is sitting on the rush mat' and 'she/he/it is laughing at the man', respectively.

2.2 Syntactic categories and predicative function

In SK, it is possible to distinguish the following syntactic categories or word classes: nouns, verbs, adjectives, adverbs, postpositions, pronouns, conjunctions and interjections (cf. Lorient, Lauriault & Day 1993: 38–39). However, there is an asymmetry in the potential functions of these classes. While verbs require special derivation in order to change word class, nouns, adjectives and even certain adverbs and postpositions can take verbal affixation directly without requiring any formal derivation and thus function as predicates (Valenzuela 1997: 84–89). The resulting predicates always take a single argument. Consider the following examples where the root *kapé-* can take nominal and verbal inflection directly:

- (21) Ja-ská-ketian-ronki, **kapetan** kishi tseka-nan-a iki.
that-COMP-PDS-HSY alligator:ERG leg:ABS take.out-MAL-PP2 AUX
'Then, it is said that the alligator bit off his leg (to his detriment).'

- (22) Jatiribi-baon **kapé** pi-kan-ai, ik-ax-bi e-n
 some-PL:ERG alligator:ABS eat-PL-INC be-PSSI-EMPH 1-ERG
kapé pi-[y]osma iki.
 alligator:ABS eat-NEG.HAB.AGTZ COP
 ‘Some (people) eat alligator but I never do it.’
- (23) Yoashiko Inka-n shinan-ketian-ronki rabé joni
 Stingy Inca-ERG think-PDS-HSY two man:ABS
kapé-ni-ke.
 (become)alligator-REM-COMPL
 ‘It is said that when the Stingy Inca concentrated on it, the two men turned
 into alligators.’ (Valenzuela 1997:85)

The next examples illustrate the same phenomenon with the adjective *ani* ‘big’ and the postposition *napon* ‘in the middle of’. Notice that, as with *kapé* in (23), when verbalizing *ani* (25), the resulting predicate denotes a change of state undergone by an inactive participant; contrastively, the verbalized *napon* (27) requires a controller agent:

- (24) ...**ani** nonti-n westíora atsa xeati chomo
 big canoe-LOC one manioc drink jar:ABS
 na-yásan-kan-a iki.
 interior-seat-PL-PP2 AUX
 ‘... they placed a jar of manioc beer inside the big canoe.’
- (25) Ja-n yapa beshé-shoko tsak[a]-a-ronki kikin-i
 3-ERG fish small-DIM drive.w/arrow-PP2:ABS-HSY very-I
ani-a iki.
 (become)big-PP2 AUX
 ‘It is said that the tiny fish he had driven with arrow grew tremendously.’
- (26) Aniwaporo-ra paro **napon** reo-koo-ke...
 ship:ABS-EV river in.the.middle.of overturn-DTRNZ-COMPL
 ‘A ship sank in the middle of the river.’ (Valenzuela 1997:89)
- (27) Ea-ra **napon-ke**.
 1:ABS-EV (get)to.the.middle-COMPL
 ‘I reached the center (of the river or lake).’ (Valenzuela 1997:89)

This particular characteristic will become relevant when discussing causativization through /ak/, in Section 3.2 (see also (69) and (78)).

2.3 Adverbial transitivity agreement and switch-reference

In SK (and other genetically related languages) adverbs, nominals in adverbial function, and adverbial clauses exhibit different inflectional morphology in accordance with the properties of the clause, in particular the transitivity status of the (matrix) verb. This typologically unusual feature of Panoan grammar, referred to as “adverbial transitivity agreement” (Valenzuela 1999), seems in contradiction with one generally proposed criterial property for adverbiality, i.e. invariability of form, or at least absence of inflectional morphology.¹¹ Adverbial transitivity agreement can be analyzed at the intraclausal and interclausal levels.

2.3.1 *Intraclausal adverbial transitivity agreement*

In monoclausal constructions, place and manner adverbs as well as nominals in these functions tend to exhibit different endings depending on the transitivity status of the predicate.¹² The following examples show that locative-allative adverbials carry the additional marker *-xon* obligatorily when the verb is transitive (29); with intransitive predicates, no additional marking is required or possible (28):

- (28) Bake-ra xobo-n tsini-ai.
 child:ABS-EV house-LOC play-INC
 ‘The child is playing at home.’ (Valenzuela 1999:358)
- (29) Ja-tian ja bake-n-a ainbaon jawen bene-n
 that-TEMP that child-TRNZ-PP2 woman:ERG POSS3 husband-GEN
 xobo-n-xon bake-shoko ani a-[a]i.
 house-LOC-T child-DIM:ABS raise-INC
 ‘Then, the woman who delivers a baby raises the little child in her husband’s house.’

On the other hand, ablatives in noncopular intransitive clauses require the additional “intransitivity” agreement marker *-x* (30); in contrast, ablatives in copular and transitive clauses do not carry any additional marker ((31) and (32), see also (6)):

- (30) Jainoa-x bewa-kan-ai ja iná tsak[a]-ainkonia-x...
 there:ABL-I sing-PL-INC that animal shoot.w/arrow-LOC:ABL-I
 ‘Then, they sang from (the place) where they shot at the animal...’
- (31) Ma-péken-xon oin-a iki xoxo bake-bo nai-kamea
 head-uncover-PSST see-PP2 AUX illegitimate.child-PL sky-LOC:ABL
 ik-ai.
 be-PP1:ABS

‘Uncovering them, (he) saw the illegitimate children that were from the sky.’

- (32) Jain-xon moa nokon papa-n yoa-bo tsinki-a ik-á
 there-PSST already POSS1 father-ERG crop-PL:ABS gather-PP2 be-PP2
 iki wai-nkonía.

AUX garden-LOC:ABL

‘By that time, my father had already gathered the crops from the garden.’

Place adverbials based on the root *jain* ‘there’ are also employed as conjunctions at different levels (cf. the use of *jainoax* and *jainxon* as intersentential conjunctors in examples (30), (32) and (34); and as intrasentential conjunctors in examples (73a–b) in Section 3.1).

Differently from locative and ablative adverbials, most manner adverbials are sensitive to both intransitivity and transitivity agreement. Thus consider the following examples with the root *jatik~jati*, ‘altogether’:

- (33) Ja-ská-ketian, **jatik-ax-bi** bo-kan-a iki, neet-i.
 that-COMP-PDS altogether-I-EMPH go.PL-PL-PP2 AUX go.up-SSSI
 ‘Then, they started to go up altogether.’

- (34) Jain-xon-ronki nami yoá a-káti-kan-ai **jati-xon-bi**
 there-PSST-HSY meat:ABS COOK-PST4-PL-INC altogether-T-EMPH
 pi-ti.

eat-INF

‘Then they cooked the meat in order to eat altogether.’

The following examples show that the adverb ‘well’, which has the same root as the adjective ‘good’, can take two alternative sets of intransitivity and transitivity agreement markers (Valenzuela 1999:362–363):

- (35) a. **Jakon-ax** ja-kan-we!
 good-I exist-PL-IMP
 ‘Live well!’
 b. **Jakon-i** ja-kan-we!
 good-I exist-PL-IMP
 ‘Live well!’
- (36) a. **Jakon-a-xon** yoá a-wé!
 good-make-T cook-IMP
 ‘Cook well!’
 b. **Jakon-a-kin** yoá a-wé!
 good-make-T cook-IMP
 ‘Cook well!’

The intransitivity and transitivity agreement markers in (35a) and (36a), *-ax* and *-xon*, coincide with those found in ablative and locative adverbials, respectively. In contrast, the markers in the (b) examples coincide with multiclausal same-subject markers in simultaneous events (to be discussed in 2.3.2 immediately below; see also the intransitivity agreement in *kikin-i*, examples (25) and (132)). The fact that the transitive *a(k)*- ‘make’ in (36a–b) is present in manner adverbials but not in locative and ablative adverbials, has been taken as evidence to propose that (some) manner adverbs must be analyzed, at least diachronically, as biclausal or serialized constructions. I will return to this topic when dealing with adverbial scope (Section 5).

2.3.2 *Interclausal adverbial transitivity agreement*

Valenzuela (1999) further discusses a particular type of multiclausal construction in which a matrix clause is modified by one or more dependent clauses that in most instances ground the situation described by the main verb. These dependent clauses are nonfinite since they lack the crucial aspectual morphology; instead, they carry (same- or switch-) reference markers. Semantically, the exact relationship between the events in the two clauses is not specified but left to be inferred from the context. Hence, SK reference-marked clauses may correspond to English temporal, purposive, conditional, causal, concessive, and even conjoined clauses. When taking same-subject (i.e., S/A) inflection, these generally adverbial clauses show different forms in correlation with the transitivity or intransitivity of their matrix verb. When the event in the dependent clause is presented as prior to that in the matrix clause, and the matrix verb is intransitive, *-ax* is obligatory; when the event in the matrix clause is presented as prior to that in the dependent clause, but the matrix verb is transitive, *-xon* is required instead. Sentence (37) contains a single intransitive matrix verb form, *manó-res-a iki*, preceded and followed by two adverbial clauses obligatorily marked by *-ax*:

- (37) ... bachi meran jiki-ax Ashi manó-res-a iki
 mosquito.net inside enter-PSSI Ashi:ABS disappear-just-PP2 AUX
 moa ka-ax.
 already go-PSSI
 ‘... Ashi entered into the mosquito net and disappeared, after leaving.’
 (PFMB¹³ 1995:27)

In (38), the matrix verb is transitive and hence *-xon* is required instead:

- (38) Joni-bó, mato r-iki e-n kena-a, pishta
 person-PL:VOC 2:ABS EV-AUX 1-ERG call-PP2 *fiesta*
 jakon-ma-shoko a-xon-bi.
 good-NEG-DIM:ABS make-PSST-EMPH
 ‘People, I have invited you in spite of having organized a not so good *fiesta*.’

Sentence (39) illustrates that the selection of either *-ax* or *-xon* is determined by the transitivity status of the matrix (and in these cases also subsequent) verb; in turn, a matrix verb can be either main (*wexa-anan-katit-ai*) or dependent (*jo-xon* and *mera-ax*). The reciprocal *-anan* functions as a detransitivizer:¹⁴

- (39) Jene-n ka-tan-ax jo-xon jawen awin
 flowing.water-ALL go-go.and.return-PSSI come-PSST POSS3 wife:ABS
 mera-ax wexa-anan-katit-ai joni-bo.
 find-PSSI cut.w/wexati-REC-PST4-INC man-PL:ABS
 ‘If when coming back from the fishing he found his wife (with another man), then the men would cut each other with the *wexati* knife...’

When the events in the two clauses overlap or take place simultaneously, a different set of same-subject markers is employed. Again, the distribution of these markers correlates with the transitivity status of the matrix verb; thus, *-i* is used with intransitive matrix verbs and *-kin* with transitive ones:

- (40) a. Ea nokon tita-n ese-kin ani a-a iki.
 1:ABS POSS1 mother-ERG advice-SSST raise-PP2 AUX
 ‘My mother raised me giving me advice.’
 b. Ea-ra esé-ya iki nokon tita-n yoiy-ai
 1:ABS-EV advice-PROP COP POSS1 mother-ERG say-PPL:ABS
 ninká-xon-katit-i.
 hear-BEN-PST4-SSSI
 ‘I have wisdom following/because I follow what my mother used to tell me.’
 (Valenzuela 1999:365)

Finally, when the event in the marked clause is subsequent to that in the matrix clause, *-nox* indicates subject coreferentiality and intransitivity of the matrix verb, while *-noxon* indicates subject coreferentiality and a transitive matrix verb:

- (41) ... tampóra rishki-kin jene-yama-nox i-kan-we!
 drum:ABS hit-SSST stop-NEG-FSSI be-PL-IMP
 ‘... play the drums without stopping/and do not stop!’
 (42) Xoi-noxon bi-i be-kan-we!
 roast-FSST get-SSSI come.PL-PL-IMP
 ‘Come get (the animal) to/and roast (it)!’

Before closing this section some words about switch-reference-marked clauses are in order. Unlike their same-reference-marked counterparts, switch-reference-marked clauses do take aspectual morphology and therefore can be said to be (more) finite. Nevertheless, in most cases, these finite clauses are followed by subor-

dinating temporal morphology, specifically by *-tian* and *-n*. Therefore, in SK, temporal clauses have specialized as different-subject clauses. There are two different-subject markers: *-ketian~-ken* indicates, together with subject non-coreferentiality, that the event in the dependent clause is viewed as preceding that in the matrix clause; on the other hand, *-aitian~-ain* is used when the event in the dependent clause is presented as overlapping or simultaneous with respect to the event in the matrix clause. Another difference between same- and switch-reference-marked clauses is that the latter are not marked for transitivity (cf. (23) in Section 2.2, as well as (43e) and (46) in 2.3.3 below, among others). It is sometimes the case that switch-reference-marked clauses lack the temporal marking and thus look just like finite clauses; in these instances, their dependent status can be inferred from the constructional contexts in which they occur (e.g. (49) in 2.3.3 and (52–53) in 3.1).¹⁵

2.3.3 *The interclausal coding of causal relations*

While the main concern of the present paper is morphological causativization processes, this section briefly shows the interclausal coding of causal relations. In these cases, one or more clauses overtly specify the actual causing events (rather than just the notion of cause), and the resulting states of affairs are expressed in separate clausal units. It can be assumed (expanding the iconic principle in Haiman 1983:783, 799) that in interclausal causation the conceptual distance between cause and effect is greater than in morphological or even periphrastic intraclausal causation, and it is this conceptual distance which is mirrored in the syntax. It has been also pointed out that, differently from morphological or syntactic causatives, the verb in a causal clause retains its usual property of assigning specific semantic roles (cf. Kemmer & Verhagen 1994: 117–119).

Although causal relations between clauses do not always result in grammaticalization, they can be perceived and interpreted even when indirectly or vaguely encoded (Podlesskaya 1993: 175). Using Russian data, Podlesskaya (ibid.: 166–167) illustrates that interclausal causal relations can be expressed by the mere juxtaposition of clauses, nonspecialized or semantically unspecified converbs,¹⁶ and nonspecialized conjunctions. In these circumstances, the causal interpretation between two situations depends on specific discourse-pragmatic conditions. Similarly to Russian, SK makes use of different strategies to code interclausal causality; however, complex sentences containing reference-marked clauses appear to be the privileged means. As mentioned in 2.3.2 above, reference-marked clauses are nonspecialized or semantically unspecified, and cover a range of meanings, causation being only one of them. Given that the cause situation precedes the caused state of affairs, reference-marked clauses coding an event prior to that in the matrix clause are the most commonly found as causal clauses.

The following examples are extracted from a text where a woman narrates how, according to Shipibo customs, her parents arranged a marriage for her. In (43c–e), the woman explains why she remains married to that man by offering three reasons; each one of these reasons is coded in a separate clause. The result is expressed in (43b), which is a main finite clause. Interestingly, matrix clauses precede dependent clauses in (43); thus, starting from the end, (43e) takes the different-subject marker *-ketian* to indicate the switch between the third person singular and the first person singular subjects, (43d) carries the same-subject marker *-ax* to keep subject referentiality and to indicate that the verb in (43c) is intransitive, and (43c) carries the same-subject marker *-xon* to continue subject referentiality and indicate that the verb in (43b) is transitive:

- (43) a. Nokon papa betan nokon tita-n ea meni-a iki,
 POSS1 father CONJ POSS1 mother-ERG 1:ABS give-PP2 AUX
 b. ikaxbi e-n shinan-yama-[a]i pota-ti,
 but 1-ERG think-NEG-INC leave-INF:ABS
 c. moa ja-bé icha bake-ya i-xon,
 already 3-ASSOC many child-PROP be-PSST
 d. icha-bi-res ea ja-bé-ribi axe-a ik-ax,
 much-EMPH-just 1:ABS 3-ASSOC-REP get.used.to-PP2 be-PSSI
 e. jakoin-ra joni-ribi i-ketian.
 good:SSSI-EV man:ABS-REP be-PDS
 ‘My father and my mother gave me in matrimony, but I never consider divorce because I already have many kids with him, I have gotten very used to him, and he is a good man.’

A cause can also be coded through reference-marked clauses expressing a state of affairs simultaneous to the event in the matrix clause. This is found in sentence (40b), which is repeated here:

- (44) Ea-ra esé-ya iki nokon tita-n yoiy-ai
 1:ABS-EV advice-PROP COP POSS1 mother-ERG say-PPI:ABS
 ninká-xon-katit-i.
 hear-BEN-PST4-SSSI
 ‘I have wisdom following/because I follow what my mother used to tell me.’

Notice that two alternative readings are given for the marked clause in (44), a manner and a causal one. The next sentence contains a simultaneous same-subject-marked clause, this time with a transitive matrix clause:

- (45) E-n-ra xobo menó-ma-ke mari bina
 1-ERG-EV house:ABS burn:DTRNZ-CAUS-COMPL kind.of.wasp:ABS
 meno-kas-kin.
 burn-want-ssst
 ‘I caused the house to burn wanting/because I wanted to burn the *mari* wasp.’

Causal clauses can also take switch-reference markers; instances with *-ketian* can be observed in (43e) and (111). In (46) below, *-aitian* occurs twice; it is in the second instance where it can be most plausibly given a cause reading:

- (46) Westíora meráya-ronki ik-á iki, naiki-i,
 one meráya¹⁷:ABS-HSY be-PP2 AUX receive.spirit.of.plants-sssi
 Bari noka-[a]itian. Ja Bari noka-[a]itian joni-bo
 Sun:ABS disappeared-sds that Sun:ABS disappear-sds person-PL:ABS
 onitsapi-kan-a iki.
 be.desperate-PL-PP2 AUX
 ‘It is said that a *meráya* had received the spirit of the plants (after drinking ayahuasca) once there was a total eclipse of the Sun. Because the Sun had disappeared, the people were desperate.’

However, SK possesses at least one postposition with a specialized causal meaning, *kopí*, which requires its object NP to be marked absolutive. Consider the example below about the traditional men fight with the *wexati* knife:

- (47) Ja iki i-res-a-ma; ainbo kopí...
 that:ABS COP be-just-PP2-NEG woman cause
 ‘That (the fight with the *wexati* knife) was not without a reason; it was because of the woman...’

Kopí is also found at the clausal level, where the dependent clause takes nominalizing participle morphology before the coding of cause. In (48) the narrator refers to the social pressure men experienced to have their (future) wives undergo the puberty rites:

- (48) Jatian ja-bé joni-bo shiro-yama-[a]i... jawen shinan
 then 3-ASSOC person-PL:ABS make.fun.of-NEG-INC POSS3 mind:ABS
 jakon iki, tsoa-bi ja-ki shiro-yama-[a]i kopí
 good COP who:ABS-EMPH 3-OBL make.fun.of-NEG-PP1 cause
 ‘Then (after she underwent the puberty rites), the people around him didn’t tease him... his mind was alright, because nobody made fun of him.’

The following sentence brings us back to the same woman in sentence (43):

- (49) E-n iráke ak-ai ja-ska-ra joni ea meni-kan-a kopí,
 1-ERG thank-INC 3-COMP-EV man:ABS 1:ABS give-PL-PP2 cause
 jaon-shaman keen-ai-ma-bi bi-ma-kan-a i-xon-bi.
 3:OBL-nicely want-SDS-NEG-EMPH get-CAUS-PL-PP2 be-PSST-EMPH
 ‘I am thankful because they (my parents) gave me in matrimony to a man
 like him, even though they made me marry him without wanting him.’

The combination of the same-subject marker *-xon* and the emphatic *-bi* in (49) above renders a concessive clause, which can be interpreted as the converse of a cause clause (see also (38)). As expected, reference-marked clauses expressing events subsequent to that in the matrix clause tend to code purpose rather than cause (cf. sentence (42)). Purpose is also coded through infinitive-marked clauses as in (34).

3. Causativization: forms and structures¹⁸

Except for a very reduced set of labile roots, most SK verbs are either inherently intransitive or inherently transitive and require explicit morphosyntactic devices in order to change their valency. While there is a single detransitivization mechanism (although with interesting allomorphy), the language exhibits distinct transitivizing morphemes, instances of neutral roots taking double derivation, use of intransitive and transitive auxiliaries, and a few cases of ablaut generally accompanied by (double) derivation.¹⁹ In addition to this, I will argue that, for a couple of verb roots, there is evidence to propose an association between plurality and transitivity-causation. Given the close semantic relationship between prototypical transitivity and causation, I will also refer to transitivizers and detransitivizers as causativizers and decausativizers, respectively. But before dealing with causativization processes, a few words on detransitivization are in order.

Inherently transitive verbs can become intransitive by taking the suffix *-t*. Although the derived intransitives may take either an S_a or an S_o argument, in most cases addition of *-t* triggers a reflexive, middle or even a passive meaning (Valenzuela 1997:205–218, 235–237; see also Table 1).

The morpheme *-t* has different allomorphs and their distribution has a historical motivation.²¹ Generally, bisyllabic roots ending in an open syllable take the allomorph *-t*. With some of these roots, *-t* triggers a quality change in the last vowel of the root. When a verb stem formed by root-t- precedes a suffix starting

Table 1. Detransitivized decausativized verb forms²⁰

Transitive	Decausative (INC)	Decausative (COMPL)
meno- burn 'burn'	meno-t-ai burn-DTRNZ-INC 'burn (self)'	menó-ke burn:DTRNZ-COMPL 'burned (self)'
piko- take.out 'take out'	piko-t-ai take.out-DTRNZ-INC 'go out'	pikó-ke take.out:DTRNZ-COMPL 'went out'
noko- meet 'meet, find'	noko-t-ai meet-DTRNZ-INC 'arrive'	nokó-ke meet:DTRNZ-COMPL 'arrived'
pake- drop 'drop, bring down'	pake-t-ai drop-DTRNZ-INC 'fall, come down'	paké-ke drop:DTRNZ-COMPL fell (intr.), came down'
jone- hide 'hide'	jone-t-ai hide-DTRNZ-INC 'hide (self)'	joné-ke hide:DTRNZ-COMPL 'hid (self)'
toe- break 'break'	toe-t-ai break-DTRNZ-INC 'break (intr.)'	toe-ke break:DTRNZ-COMPL 'broke (intr.)'
ponte- straighten 'straighten'	ponte-t-ai straighten-DTRNZ-INC 'straighten (self)'	ponté-ke straighten:DTRNZ-COMPL 'straightened (self)'
chope- open 'open, break'	chope-t-ai open-DTRNZ-INC 'open (intr.), break (intr.)'	chopé-ke open:DTRNZ-COMPL 'opened (intr.), broke (intr.)'
choka- wash 'wash'	chokiit-ai wash:DTRNZ-INC 'wash (self)'	chokí-ke wash:DTRNZ-COMPL 'washed (self)'
xoka- peel 'peel'	xokoot-ai peel:DTRNZ-INC 'peel (self)'	xokó-ke peel:DTRNZ-COMPL 'peeled (self)'
naranbe- turn over 'turn over'	naranbe-keet-ai/naranbe-t-ai turn over-DTRNZ-INC 'turn over (intr.)'	naranbee-ke turn over:DTRNZ-COMPL 'turned over (intr.)'
boex- comb 'comb'	boex-eet-ai comb-DTRNZ-INC 'comb (self)'	boex-ee-ke comb-DTRNZ-COMPL 'combed (self)'

Table 1. (continued)

Transitive	Decausative (INC)	Decausative (COMPL)
kepen- open 'open'	kepemeet-ai open:DTRNZ-INC 'open (intr.)'	kepemeet-ke open:DTRNZ-COMPL 'opened (intr.)'
rontan- hang 'hang'	rontameet-ai hang:DTRNZ-INC 'hang (intr.)'	rontameet-ke hang:DTRNZ-COMPL 'hanged (intr.)'

with a consonant, the /t/ is deleted and the last vowel of the root gets compensatory stress ((45), (120), (122), (124b), (125b), (126a)). Other allomorphs of *-t* are: *-meet*, when the stem ends in /n/ (81); *-(k)oot* (26); *-(k)eeet*, *-(k)iiit* and *-kaat*.

3.1 The general causativizer *-ma*

In SK, causative verb forms can arise from the addition to a verb stem of the general causativizer *-ma*.²² The meaning of *-ma* can be said to be very schematic since, depending on the constructional and pragmatic contexts in which it occurs, it translates into English 'make', 'have', 'cause', 'let', 'allow', and even 'contribute' and 'invite'. Consider the following examples illustrating the different force-dynamics (Talmy 1985) of *-ma* constructions (see also ex. (49)):

- (50) ... ja-ská-xon-ki xea-**ma**-kan-a iki meskó xeati...
 that-COMP-PSST-HSY2 drink-CAUS-PL-PP2 AUX different drink:ABS
 '... then, they invited him different kinds of drinks...'
- (51) ... Paro rebo-n ka-xon... jato noko-**ma**-yama-a iki.
 river extreme-ALL go-PSST 3PL:ABS meet-CAUS-NEG-PP2 AUX
 '... getting to the end of the (Ucayali) river... (she) didn't let them find her.'
- (52) Ja r-iki nokon bake, jakon-tani-shoko
 that:ABS EV-COP POSS1 child:ABS good-ATT-DIM
 i-ke-**ma**-bi mato be-ste-**ma**-kas-kin e-n
 be-PDS-NEG-EMPH 2p:ABS forehead-cut-CAUS-DES-SSST 1-ERG
 a-t-ai, kena kena-**ma**-kin.
 make-PROG-INC call call-CAUS-SSST
 'This is my daughter, and although she is only a bit good/pretty, I am inviting you all, wishing to have you cut her fringe.'

- (53) Ja-tian ja xontako jawen tita-n
 that-TEMP that unmarried.girl:ABS POSS3 mother-ERG
 xoi meni-ma-[a]i keen-yama-[a]i-bi...
 roasted.meat/fish:ABS give-CAUS-INC want-NEG-SDS-EMPH
 ‘Then, her; mother; makes the unmarried girl; give roasted meat/fish (to
 the man who had asked her; in matrimony) even though she; doesn’t want
 to...’

The specific type of force-dynamic relation may be encoded through a same-reference-marked clause which functions as a manner adverbial, as in (54b)–(54d):

- (54) a. E-n-ra jo-ma-ke.
 1-ERG-EV come-CAUS-COMPL
 ‘I made/had/allowed/invited him (to) come.’
 b. E-n-ra nini-xon jo-ma-ke.
 1-ERG-EV pull-PSST come-CAUS-COMPL
 ‘I forced/obliged him to come, by pulling him.’
 c. E-n-ra tea-res-kin jo-ma-ke.
 1-ERG-EV bother-just-SSST come-CAUS-COMPL
 ‘I obliged/demanded him to come (by bothering him/insisting on it).’
 d. E-n-ra mee-res-kin jo-ma-ke.
 1-ERG-EV touch-just-SSST come-CAUS-COMPL
 ‘I insisted/begged him to come’ (no physical contact necessarily)

The weakest kinds of causation might be coded in an even more indirect way with the desired result expressed in a separate subordinate clause. Thus, in the following example the causativizer *-ma* is not attached to the result predicate but to *shinan-* ‘think, plan, consider’:

- (55) a. E-n-ra mia shinan-ma-kas-ai jo-ti.
 1-ERG-EV 2:ABS think-CAUS-DES-INC come-INF
 ‘I suggest that you come/I wish to make you consider to come.’
 Also, ‘I want to remind you to come.’

Another possibility is to use the associative applicative *-kin* instead of *-ma*:

- b. E-n-ra mia shinan-kin-kas-ai jo-ti.
 1-ERG-EV 2:ABS think-ASSOC-DES-INC come-INF
 ‘I’d suggest that you come (lit. I wish to accompany you in considering
 to come/I wish to consider with you the possibility of coming).’

(55b) illustrates an area of functional overlap between the causativizer *-ma* and the associative applicative. Another instance of functional overlap can be attested in what Dixon (2000:62, 73) calls the ‘involvement parameter’ in relationship to

the causer, and Shibatani & Pardeshi (this volume) refer to as ‘sociative causation’. Thus, a sentence like (56) may render a sociative causation, a comitative, or an assistive reading ((55b) might also be interpreted as an instance of sociative causation):²³

- (56) Yoxaman-ra bake bachi-n jiki-kin-ke.
 old.woman:ERG-EV child:ABS mosquito.net-ALL enter-ASSOC-COMPL
 ‘The old woman made the child enter the mosquito net (by entering herself)./The old woman accompanied the child into the mosquito net./The old woman helped the child enter the mosquito net.’

SK allows for a natural force to be an agentive causer. For example, the only way to express the equivalent of the English intransitive verb ‘drown’ is in a transitive construction with the verb ‘kill’, coding the flowing water²⁴ as the A argument and the participant undergoing drowning as O:²⁵

- (57) Jene-n-ronki bake-bo rete-ke.
 flowing.water-ERG-HSY child-PL:ABS kill-COMPL
 ‘(I heard that) the children drowned (lit. ‘the flowing water killed the children’)

The equivalent of the English transitive verb ‘drown (somebody)’ is a causativized predicate with the flowing water as agentive causee:

- (58) ... Bai Shita-n-ki jato yatan-xon jene
 Bai Shita-ERG-HSY2 3PL:ABS catch-PSST flowing.water:ABS
 rete-ma-pake-a iki.
 kill-CAUS-one.by.one-PP2 AUX
 ‘... the Bai Shita held them and drowned them one by one (lit. held them and caused the flowing water to kill (them) one by one).’ (PFMB 1995: 17)

Two further examples of forces as agentive causees are:

- (59) E-n-ra koshon-xon oi be-ma-ke.
 1-ERG-EV bewitch.w/tobacco-PSST rain:ABS come.PL-CAUS-COMPL
 ‘Bewitching with tobacco smoke I caused the rain (to come).’
- (60) Yobekan-ra mayan niwe xontako a-ma-ke.
 sorcerer:ERG-EV whirlwind:ABS unmarried.girl:ABS make-CAUS-COMPL
 ‘The sorcerer caused the whirlwind to harm the unmarried girl.’²⁶

SK *-ma* can be combined with all kinds of verb stems. So far, I have included instances of ditransitive (53), transitive ((49)–(52), (55), (58), and (60)), and active intransitive ((54) and (59)) predicates, causativized by the addition of *-ma*. Below,

I include examples involving different kinds of intransitive base predicates whose subjects cannot be said to be active participants:

The S-argument is an experiencer

- (61) Ea-ra xontako-nin waste-n-xon keen-ma-ke
 1:ABS unmarried.girl-ERG waste²⁷-TRNZ-PSST want-CAUS-COMPL
 /shinanbeno-ma-ke.
 slip.the.mind-CAUS-COMPL
 ‘The unmarried girl made me love/forget her by treating me with *waste*.’
- (62) Mi-n-ra tita siná-ma-ke koríki
 2-ERG-EV mother:ABS be(come).angry-CAUS-COMPL money:ABS
 yoi-xon.
 tell-PSST
 ‘You made mother get angry, telling her about the money (e.g., you lost).’
- (63) Mi-n-ra tita bene-ma-ke koríki
 2-ERG-EV mother:ABS be(come).happy-CAUS-COMPL money:ABS
 yoi-xon.
 tell-PSST
 ‘You made mother feel happy, telling her about the money (e.g., you earned).’
- (64) Mi-n-ra tita rabin-ma-ke yometso-xon.
 2-ERG-EV mother:ABS be(come).ashamed-CAUS-COMPL be.thief-PSST
 ‘You made mother feel ashamed, having stolen.’

The S-argument is a patient

- (65) Ja-n-ra ea niskan-ma-ke tobí
 3-ERG-EV 1:ABS sweat-CAUS-COMPL dislocated.bodypart:ABS
 a-xon.
 make-PSST
 ‘S/he made me sweat massaging in the area of my dislocated bodypart (to reset it).’
- (66) Ea-ra nokon patoro-nin nomi-ma-ke.
 1:ABS-EV POSS1 master-ERG be.thirsty-CAUS-COMPL
 ‘My master made me undergo thirst (he didn’t give me anything to drink while working the whole day).’
- (67) Ea-ra piti tashianka-nin nomi-ma-ke.
 1:ABS-EV fish salted-ERG be.thirsty-CAUS-COMPL
 ‘The salty fish (I ate) made me feel thirsty.’

- (68) E-n-ra Piko neté-ma-ke.
 1-ERG-EV Piko:ABS be(come).quiet-CAUS-COMPL
 ‘I made Piko become quiet (either by asking him to shut up or by putting my hand on his mouth).’
- (69) ... nishi xea-xon-ki Iskon Niwe-n jawen yora
 rope:ABS drink-PSST-HSY2 Iskon Niwe-ERG POSS3 body:ABS
 yoshin-ma-[a]i, saki saki-i i-non kaman.
 become.spirit-CAUS-INC tremble.tremble-SSSI be-FDS LIM
 ‘... drinking *ayahuasca*, Iskon Niwe made his body turn into spirit until it trembled repeatedly.’

As shown in Table 1, there is a set of derived intransitive verbs which are formed by the addition of *-t* to transitive roots (see Table 1). Most generally, the resulting predicates require an inactive subject. The causativizer *-ma* can also be added to these decausatives or anticausatives, as shown in Table 2 (cf. the Japanese examples (1a–c) in Shibatani & Pardeshi, this volume).

As shown in the previous sentences in this section, the single or A argument of the base predicate is necessarily coded as the O of the causativized predicate, and is thus marked absolutive. When the subject of the base predicate is an A argument, its A/O alternation is reflected in the case-marking change from ergative to absolutive:

- (70) Rabi-n-ra bi-ke mecha joni.
 Rabi-ERG-EV get-COMPL good.fisher/hunter person:ABS
 ‘Rabi got (as a husband) a good fisherman/hunter.’

Table 2. Addition of *-ma* to decausative stems²⁸

	Transitive	Decausative	Decausative + <i>-ma</i>
‘burn’	meno-	meno-t-	menó-ma-
‘take out’	piko-	piko-t-	pikó-ma-
‘meet’	noko-	noko-t-	nokó-ma-
‘drop’	pake-	pake-t-	paké-ma-
‘hide’	jone-	jone-t-	joné-ma-
‘break’	toe-	toe-t-	toé-ma-
‘straighten’	ponte-	ponte-t-	ponté-ma-
‘open’	chope-	chope-t-	chopé-ma-
‘wash face’	choka-	chokiit-	chokí-ma-
‘peel’	xoka-	xokoot-	xokó-ma-
‘turn over’	naranbe-	naranbeet-	naranbee-ma-
‘comb’	boex-	boexeet-	boexee-ma-
‘open’	kepen-	kepemeet-	kepemeet-ma-
‘hang’	rontan-	rontameet-	rontameet-ma-

- (71) Tita betan papa-n-ra Rabi bi-ma-ke
 mother CONJ father-ERG-EV Rabi:ABS get-CAUS-COMPL
 mecha joni
 good.fisher/hunter person:ABS
 ‘Mother and father made Rabi get (as husband) a good fisherman/hunter.’

The transitivity increase produced by *-ma* can be seen in the selection of the appropriate pro-verb in answers to polar questions,

- (72) a. Rabi-ki beno-a?
 Rabi:ABS-INT get.married-COMPL:INT
 ‘Did Rabi get married?’
 b. Ik-í /ik-[y]áma
 be-SSSI /be-NEG
 ‘Yes/No’
 c. Rabi-ki beno-ma-a?
 Rabi:ABS-INT get.married-CAUS-COMPL:INT
 ‘Did s/he make Rabi get married?’
 d. A-kin /ak-[y]áma
 make-SSST make-NEG
 ‘Yes/No’

and in the selection of the appropriate adverbial (functioning here as a conjunction). (73a) below contains the reflexive stem *benxokaa-* ‘get ready’; however, in (73b), the stem takes the causativizer *-ma* and hence the conjunction changes in accordance with the transitivity of the subsequent predicate:

- (73) a. Kesin-ra nashi-ke jainoa-x benxokaa-ke.
 Kesin:ABS-EV bathe-COMPL there:ABL-I get.ready-COMPL
 ‘Kessin took a bath and got ready.’
 b. Kesin-ra nashi-ke jain-xon benxokaa-ma-ke.
 Kesin:ABS-EV bathe-COMPL there-T get.ready-CAUS-COMPL
 ‘Kessin took a bath and made (her/him) get ready.’

The causative *-ma* can occur recursively:

- (74) E-n-ra mia kirika bo-ma-ma-ma-ke.
 1-ERG-EV 2:ABS letter:ABS carry-CAUS-CAUS-CAUS-COMPL
 ‘I had her/him have her/him send you a letter.’

It is possible for *-ma* to cooccur with applicatives in the same verb. In these cases, *-ma* precedes the applicatives:

- (75) Moa-ra mi-n ea chomo toe-**ma-anaan-ke**.
 already-EV 2-ERG 1:ABS jar:ABS break:DTRNZ-CAUS-MAL-COMPL
 ‘Already you made the jar break, to my detriment.’
 (Valenzuela 1997: 128–129)
- (76) E-n-ra mi-n bake mia nonti a-**ma-xon-ke**.
 1-ERG-EV 2-GEN child:ABS 2:ABS canoe:ABS make-CAUS-BEN-COMPL
 ‘On your behalf I made your son construct a canoe.’ (Valenzuela 1997: 129)

Given that causees are marked absolutive regardless of the valency of their base predicate, in causative constructions with a transitive base predicate both the causee and the “affectee”²⁹ are marked in the same way. In this respect, SK differs from what appears to be the most common pattern cross-linguistically; i.e., that causees are marked differently from affectees and intransitive causees are marked differently from transitive causees (Comrie 1976). This fact of SK causative constructions can be accounted for straightforwardly if we view them as extensions of simple transitive and ditransitive clauses (Kemmer & Verhagen’s 1994: 123–124). Recall from Section 2.1 that in SK the patient and the goal of a ditransitive construction are marked absolutive.³⁰ Furthermore, since SK does not impose general restrictions either on double causativization or on combinations of causativization and applicativization, it is possible to have several absolutive-marked arguments in the same clause as illustrated in example (76) above (cf. Givón 1976: 333–335 and 339–340 for restrictions on causativization in some Bantu languages).

3.2 Other causativization strategies

An interesting characteristic of SK grammar introduced in Section 2.2 is the fact that nouns, adjectives and even adverbs and postpositions can take verbal affixation directly without requiring any formal derivation (21–27). Crucially, verbs do require special derivation to function as nonpredicates. Thus, a root such as /*nenké*/ can be analyzed both as an adjective, ‘long’, or an inactive intransitive verb with its only argument having the patient-of-change semantic role, i.e. ‘become long’. These adjectival roots causativize by the addition of /*ak*/³¹ which most probably corresponds to the transitive verb root *ak-* ‘make’. Examples (77) and (78) illustrate the use of /*nenké*/ in adjective and predicate functions, while (79) shows the causativized stem:

- (77) Westíora nishi **nenké-pari** ea bi-xon-we!
 one rope long:ABS-first 1:ABS get-BEN-IMP
 ‘First, get me a long rope!’

- (78) Tita-n mapó taran-a-ra nenké-ke.
 mother-ERG clay knead-PP2:ABS-EV (become)long-COMPL
 ‘The clay that mother had kneaded became long(er).’
- (79) Joni-boan-ra jato-n-bi tsinkíti nenké
 person-PL:ERG-EV 3PL:ERG-EMPH meeting:ABS (become)long
 a-kan-ai.
 make-PL-INC
 ‘The people themselves make the meeting (become) longer.’

In addition to adjectival roots, adverbs and postpositions can also causativize with /ak/, as well as a group of noun and verb roots.³² For example: *bebon* ‘in the front, in front of’, *bebon-* ‘get to the front’, *bebon a(k)-* ‘put something in the front’; *ota* ‘shadow’, *ota-* ‘become shadowy’, *ota a(k)-* ‘shade (tr.)’.

A third causativizer is the suffix *-n*, which applies to a restricted number of noun and intransitive verb roots to yield transitive-causative stems. When combined with nouns, *-n* contributes the meaning of affecting somebody using that which is referred to by the noun; i.e. a kind of instrumental causativizer. Consider the following example with the noun root *rao* ‘medicine (generally plants)’:

- (80) Moatian nawa-n rao-bo yama-katit-ai, no-n
 long.ago outsider-GEN medicine-PL:ABS exist.not-PST4-INC 1PL-GEN
 rao-n-bi-ribi payó-bo rao-n-kati-kan-ai.
 medicine-INST-EMPH-REP wounds-PL:ABS medicine-TRNZ-PST4-PL-INC
 ‘Long time ago, there were no Western medicines, and they (our ancestors)
 cured the (infected) wounds with our own medicine.’

In (81), the causativized stem *rao-n-* ‘treat someone with medicine’ is further decausativized thus resulting in *raomeet-* ‘be treated (with medicine)’ (the form *rao-n-ma-* is found in (114)):

- (81) Noa jain wirákoča-bo keská raomeet-[t]i
 1PL:ABS there white.people-PL COMP medicine:TRNZ:DTRNZ-INF
 xobo-oma iki, ospital-oma iki.
 house-PRIV COP hospital-PRIV COP
 ‘Unlike the white people, we have no houses where to be treated; we have
 no hospitals.’

Other instances of “instrumental causativization” are: *axa* kind of plant poison/*axa-n-* ‘(to) poison fish’, *joi* ‘word’/*joi-n-* ‘criticize’, *xeni* ‘fat’/*xeni-n-* ‘grease something’, *waste* kind of plant with special powers/*waste-n-* ‘change somebody’s behavior by treating him/her with *waste*’ (61), *bata* ‘sweet, sugar’/*bata-n* ‘sweeten’.

-n can also be added to a few intransitive verb roots like *oxa-* ‘sleep’/*oxa-n-* ‘put to sleep’, *pani-* ‘hang (intr.)’/*pani-n-* ‘hang (tr.)’, *kesha-* ‘confess (intr.)’/*kesha-n-* ‘tell, give notice’:

- (82) a. Ani texó jiwi-n-ra nato shino pani-ai.
big *quinilla* tree-LOC-EV this capuchin.monkey:ABS hang-INC
‘This capuchin monkey (usually) hangs on the big *quinilla* tree.’
- b. Nokon koka-n awinin-ra jawen chopá
POSS1 maternal.uncle-GEN wife:ERG-EV POSS3 clothes
patsa-a pani-n-ai.
wash-PP2:ABS hang-TRNZ-INC
‘My uncle’s wife is hanging her recently washed clothes.’

-n also takes part in double derivation processes involving a closed set of roots which refer to body postures or movements to enter into a posture, and which are neutral in terms of transitivity. The corresponding decausativizer suffix is the general ‘detransitivizer’ *-t*. The root *raka-* ‘lying posture’ is used here to illustrate the double derivation process:

- (83) ... bo-xon kawin taraman-ki raka-n-kan-a iki.
carry-PSST rush.mat extend:LOC-HSY2 lie-TRNZ-PL-PP2 AUX
‘... carrying [the white-lipped peccaries] they laid them on the extended rush mat.’
- (84) Nato yawa rabé rete-kan-a raka-t-a chopá
this white.lipped.peccary two:ABS kill-PL-PO>S lie-t-PP2 cloth:ABS
bi-xon mapo-we!
get-PSST cover-IMP
‘Get a cloth and cover these two white-lipped peccaries that [they] have killed and that are lying (there)!’

There is also a set of (mostly) onomatopoeic roots that can be used either transitively or intransitively depending on the auxiliary they take. Thus, a root such as *kobin* combined with the transitive auxiliary *ak-* means ‘boil (tr.)’, while the same root plus the intransitive auxiliary *ik-* results in ‘boil (intr.)’. A further example is *biski ak-* ‘to shake something’ versus *biski ik-* ‘to shake oneself’.³³ The same is true of clearly onomatopoeic roots such as *shee*, *jojo*, *to* and *betso*:

Table 3. Onomatopoeic verbs and double auxiliarization

shee ak- ‘fry (tr.)’	shee ik- ‘fry (intr.)’
jojo ak- ‘bark at’	jojo ik- ‘bark’
too ak- ‘shoot at’	too ik- ‘shoot (self), suicide’
betso ak- ‘kiss somebody (Western style)’	betso ik- ‘kiss (self)’

Section 4.2 includes sentences illustrating the double auxiliariation strategy in SK.

Finally, it is worth bringing into the discussion the intransitive verb roots *jo-* ‘come’ and *ka-* ‘go’. These verbs are the only ones in the language that make use of two unrelated roots to distinguish singular versus nature-meteorological and plural subject nominals. Thus, *jo-* and *ka-* are used for singular subjects, while *be-* and *bo-* are used for subjects such as ‘rain’, ‘flooding’, ‘clouds’, ‘school of fish’, ‘wind’, ‘waves’, etc., as well as for plural subjects. The next two examples illustrate the plural use of *be-* and *bo-* (see also sentences (33), (42), (59), and (108)):

- (85) a. Koshi mee-anan-kan-ax **bo**-kan-ai atsa xeati
 strength touch-REC-PL-PSSI go.PL-PL-INC manioc drink:ABS
 xea-i.
 drink-SSSI
- b. Jain-xon-ribi iná tsaka-kan-ai ja Ani
 there-PSST-REP animal:ABS shoot.w/arrow-PL-INC that Ani
 Xeati-nin be-a joni-baon.
 Xeati-ALL come.PL-PP2 person-PL:ERG
 ‘After trying their strength with each other, they went to drink manioc beer. Afterwards, those people who had come to the Ani Xeati ceremony shot arrows at the animal.’

Now, when looking at the transitive roots *be-* ‘bring’ and *bo-* ‘carry, take’, we are faced with what appears to be a case of homophony (see also (6), (92), (74), and (110)):

- (86) No-n-ra joni **be**-ke no-n jema-nko.
 1PL-ERG-EV person:ABS bring-COMPL 1PL-GEN village-ALL
 ‘We brought the man to our village.’
- (87) No-n-ra joni **bo**-ke jawen jema-nko.
 1PL-ERG-EV person:ABS carry-COMPL POSS3 village-ALL
 ‘We carried/took the man to his village.’

However, there is evidence to claim that the selection of the suppletive pairs *jo-/be-* and *ka-/bo-* is determined not just on the basis of a number distinction but also on transitivity-causality grounds. Under this latter analysis, the roots *be-* ‘bring’ and *bo-* ‘carry’ would be the causative counterparts of the singular noncausatives *jo-* ‘come’ and *ka-* ‘go’ (cf. the singular causative form *jo-ma-* in (54)). Hence, the proposed distribution is the following:

Table 4. Distribution of the suppletive forms *jo-*, *be-*, *ka-* and *bo-*

<i>jo-</i> movement towards (singular noncausative)
<i>be-</i> movement towards (nature-meteorological, plural, causative)
<i>ka-</i> movement away (singular noncausative)
<i>bo-</i> movement away (nature-meteorological, plural, causative)

Thus, (part) of the meaning of *be-* would be ‘cause something/somebody to come’, i.e. ‘bring’; and (part) of the meaning of *bo-* ‘cause something/somebody to go’; i.e. ‘carry, take’.

There are two pieces of evidence in favor of the analysis that *be-* and *bo-* are also the transitive-causative counterparts of *jo-* and *ka-*, respectively. First, the four roots discussed here are included in the closed set of verbs that do not require pro-verb forms in answers to polar questions (the other roots are the existential *ja-*, the nonexistential *yama-*, and the transitive *bi-* ‘get’). That is, while the way to answer polar questions involving most SK verbs is by using either the intransitive pro-verb *ik-* or the transitive pro-verb *ak-* (see also examples (72b) and (72d)), the verbs in question employ their own root instead, following the same distribution as in Table 4 above. This is exemplified in Table 5.

Table 5. Distribution of answers to polar questions with *jo-*, *ka-*, *be-* and *bo-*

-Titaki joai?	-jo-i/jo-ama	-Is mother coming?	-yes/no
-Titaki moa kai?	-ka-i/k-ama	-Is mother leaving already?	-yes/no
-Oiki beai?	-be-i/be-ama	-Is it raining?	-yes/no
-Oiki boai?	-bo-i/bo-ama	-Is the rain moving away?	-yes/no
-Nawaboki bekanai?	-be-i/be-ama	-Are the outsiders coming?	-yes/no
-Nawaboki bokanai?	-bo-i/bo-ama	-Are the outsiders leaving?	-yes/no
-Titanki beai?	-be-kin/be-ama	-Is mother bringing (it)?	-yes/no
-Titanki boai?	-bo-kin/bo-ama	-Is mother carrying (it)?	-yes/no

Notice that the ‘yes’ answers to *be-* ‘come’ and *bo-* ‘go’ differ from those corresponding to ‘bring’ and ‘carry’, in that the former take the same-subject intransitive marker *-i*, while the latter take its transitive counterpart *-kin* (cf. 1.3.2).

A second piece of evidence is provided by the verbal morphemes *-kiran/-beiran* ‘coming’ and *-kain/-bain* ‘going’, with respect to a place set up in the discourse. These pairs might have arisen through grammaticalization of forms involving the roots *jo-/be-* and *ka-/bo-*, respectively. On the one hand, these verbal morphemes have roughly the same meaning as the main verb forms, and also a similarity in form can be observed³⁴ (with the exception of *-kiran* where one would rather expect *j(e)iran*). However, what makes this argument especially convincing is that the seemingly strange distribution of the verbal morphemes can be accounted for

straightforwardly if we consider that the main verb forms *be-* and *bo-* are not only the plural but also the transitive-causative counterparts of *jo-* and *ka-*; that is, that *be-* ‘come (plural)’ and *be-* ‘bring’ are the same root, as well as *bo-* ‘come (plural)’ and *bo-* ‘carry’ (cf. Lorient, Lauriault & Day 1993: 132, 351). The distribution of the verbal morphemes is as follows:

Table 6. Distribution of the verbal modifiers *-kiran*, *-beiran*, *-kain* and *-bain*

-kiran movement towards (singular intransitive)
-beiran movement towards (plural intransitive, transitive)
-kain movement away (singular intransitive)
-bain movement away (plural intransitive, transitive)

Generally, the verbal morphemes in question function as adverbial modifiers of the predicate they attach to. Nevertheless, they can sometimes retain what was plausibly their former function, that of coding subsequent events (cf. (88b) and (89)). The next examples show *-kiran* and *-kain* after intransitive roots with singular subjects:

- (88) a. ... Bari-ki wení-**kiran**-i jo-á
 Sun:ABS-HSY2 standing.position:DTRNZ-coming-SSSI come-PP2
 iki.
 AUX
 ‘... Sun stood up and came...’ (PFMB 1995:27)
- b. Ja-ra wení-**kiran**-ke
 3:ABS-EV standing.position:DTRNZ-coming-COMPL
 /tanti-**kiran**-ke.
 rest-coming-COMPL
 ‘S/he stood up/rested and came.’
- (89) Ja-ra tanti-**kain**-ke /wení-**kain**-ke.
 3:ABS-EV rest-going-COMPL standing.position:DTRNZ-going-COMPL
 ‘S/he rested/stood up and left.’
- (90) Ja bo-kan-a basi-**kain**-aitian yoxan-shoko-n
 that go.PL-PL-PP2 be.time-going-SDS old.woman-DIM-ERG
 ninkat-a-ronki ik-á iki, bake-bo-ki sion ik-i
 hear-PP2-HSY be-PP2 AUX child-PL:ABS-HSY2 ONOM be-SSSI
 korat-i.
 making.noise-SSSI
 ‘Some time after they had left, the old woman heard the children screaming, making a lot of noise.’ (PFMB 1995:17)

The following sentences illustrate the use of *-beiran* and *-bain* with plural and transitive subjects:

- (91) Ja Bari-n ka-kin Ashi bechi-a iki, jawen yawa
 that Sun-ERG go-SSST Ashi:ABS face-PP2 AUX POSS3 w-l.peccary:ABS
 xepen-**beiran**-i jo-aitian...
 set.free-coming-SSSI come-SDS
 ‘When the Sun_i was leaving, he_i met Ashi_j as he_i was coming from setting
 the white-lipped peccaries free.’ (PFMB 1995:28) [transitive singular]
- (92) Ja beshé a-ketian ainbo-bo tsamá-**beiran**-xon
 that:ABS cut.into.pieces-PDS woman-PL:ABS get.together-coming-PSST
 xoi-ti bo-kan-ai.
 roast-INF carry-PL-INC
 ‘After (others) cut it (the meat) into pieces, the women get together and
 take it to roast.’ [intransitive plural]
- (93) ... ka-kin no-n na-tsá
 go-SSST 1PL-ERG interior-drive.w/arrow
 na-tsá-**bain**-a iki...
 interior-drive.w/a-going-PP2 AUX
 ‘... while going (up the river) we kept on driving (arrows) into the water
 (trying to catch fish).’ [transitive plural]
- (94) ... yoxan-shoko-ki chomo bi-**bain**-i-ki tenama
 old.woman-DIM:ABS-HSY2 jar:ABS get-going-SSSI-HSY2 to.the.shore
 ka-a iki, ja bake-bo oin-i.
 go-PP2 AUX that child-PL:ABS see-SSSI
 ‘Later on, the grandmother got her jar and went to the shore to see the
 children.’ (PFMB 1995:17) [transitive singular]

Therefore, I conclude that *be-* and *bo-* are the plural and transitive-causative suppletive forms of *jo-* and *ka-*, respectively. One could speculate that, after all, when one brings or carries someone or something it is implied that one comes or goes with that someone or something.

3.3 On the syntactic status of causatives

SK overtly distinguishes monoclausal from multiclausal constructions (crucially, a clause cannot end in a verb root or stem), and it is obvious that the causativized predicates discussed here are monoclausal. However, a question that arises is whether all these processes constitute instances of synthetic derivation, where the cause and the result predicate are expressed in a single word composed of two mor-

phemes, or whether there are also cases of analytic causativization with cause and effect being expressed through separate words.

Although in most cases /ak/ is realized as phonologically bound to the base predicate, it seems to be the case that its syntactic status is somewhat different from that of the remaining causativizers.³⁵ Unlike *-ma* and *-n*, /ak/ behaves, at least to a certain extent, as a more independent element. Consider the following examples, where two roots coding the resulting change of state can be coordinated through the adjectival conjunction *itan* and the cause predicate occurs only once, following the conjoined sequence³⁶:

- (95) E-n-ra *lejia-nin* soro pené itan bená
 1-ERG-EV bleach-INST *sol*:ABS (become)shiny CONJ (become)new
 a-ke.
 make-COMPL
 ‘I made the *sol* coin look shiny and look like new.’
- (96) E-n-ra xobo nenké itan naxbá a-ke.
 1-ERG-EV house:ABS (become)long CONJ wide make-COMPL
 ‘I made the house longer and wider.’
- (97) E-n-ra bake mankoa-nin potó itan keras
 1-ERG-EV child:ABS mango-MNS (become)full CONJ (become)dirty
 a-ke.
 make-COMPL
 ‘With the mangos, I made the child become stuffed and dirty.’

In contrast, when causativizing with *-ma*, there is no possibility of coordinating two result predicates without having *-ma* repeated.³⁷ The following sentences include two alternative ways to express the equivalent to the English ‘Jisbe made them burn the garden and build the house’. Notice that only the sentences where *-ma* is repeated after each caused predicate are grammatical:

- (98) a. Jisbe-n-ra jato wai meno-**ma**-xon xobo
 Jisbe-ERG-EV 3PL:ABS garden:ABS burn-CAUS-PSST house:ABS
 a-**ma**-ribi-ke.
 make-CAUS-REP-COMPL
- b. *Jisbe-n-ra jato wai meno-xon xobo a-**ma**-ribi-ke.
- c. Jisbe-n-ra jato wai meno-**ma**-ke jain-xon
 Jisbe-ERG-EV 3PL:ABS garden:ABS burn-CAUS-COMPL there-T
 xobo-a-**ma**-ribi-ke.
 house:ABS-make-CAUS-REP-COMPL
- d. *Jisbe-n-ra jato wai meno jain-xon xobo a-**ma**-ribi-ke.
 ‘Jisbe made them burn the garden and build the house.’

The following sentences illustrate the same claim, this time with base predicates taking a single argument. The English equivalent is ‘Jisbe made the child sing and cry’:

- (99) a. Jisbe-n-ra bake bewa-**ma**-xon-bi
 Jisbe-ERG-EV child:ABS sing-CAUS-PSST-EMPH
 wini-**ma**-ribi-ke.
 cry-CAUS-REP-COMPL
- b. *Jisbe-n-ra bake bewa-xon-bi wini-**ma**-ribi-ke.
- c. Jisbe-n-ra bake bewa-**ma**-ke jain-xon
 Jisbe-ERG-EV child:ABS sing-CAUS-COMPL there-T
 wini-**ma**-ribi-ke.
 cry-CAUS-REP-COMPL
- d. *Jisbe-n-ra bake bewa jain-xon wini-**ma**-ribi-ke.
 ‘Jisbe made the child sing and cry.’

Furthermore, it is possible to causativize adjectival roots by using *-ma* instead of */ak/* (with a slightly different meaning, see Section 4.1). However, in these instances, it is ungrammatical to coordinate the two result predicates and employ the causativizer only once:

- (100) a. E-n-ra bake ani-**ma**-ke jain-xon
 I-ERG-EV child:ABS (become)big-CAUS-COMPL there-T
 xoa-**ma**-ke.
 (become)fat-CAUS-COMPL
- b. *E-n-ra bake ani jain-xon xoa-**ma**-ke.
- c. *E-n-ra bake ani itan xoa-**ma**-ke.
 ‘I caused the child to grow and get fat.’

Hence, the causativizer */ak/*, at least with adjectival roots, shows more structural independence than the general causativizer *-ma*, since it allows for independent words to occur between the result predicate and itself (see Shibatani & Pardeshi, this volume, who propose a continuum in the formal dimension, both language internally and language externally). This formal characteristic is compatible with the fact that */ak/* is semantically transparent while *-ma* and *-n* are not. Nevertheless, the same degree of structural dependency is not shown by the transitive auxiliary *ak-*, despite their formal and etymological identity and the fact that *ak-* is not phonologically bound to the base stem to its left (the latter feature is evidenced by the frequent realization of a glottal stop between the stem and the auxiliary). This can be seen in the following sentences, showing that coordination of two accompanying predicates is not possible unless the auxiliary is repeated:

- (101) a. E-n-ra yapa kobin ak-ai jain-xon xeni shee ak-ai.
 1-ERG-EV fish:ABS boil-INC there-T fat:ABS fry-INC
 b. *E-n-ra yapa kobin jain-xon xeni shee ak-ai.
 'I boiled the fish and fried the fat.'
- (102) a. E-n-ra nami shee ak-ai ja-pekao kobin ak-ai.
 1-ERG-EV meat:ABS fry-INC that-after boil-INC
 b. *E-n-ra nami shee ja-pekao kobin ak-ai.
 'I fried the meat and then boiled it.'

Another property of causative constructions with /ak/ is the possibility of inserting between the root and the causativizer modifying morphemes such as the intensifier *-shaman*, the diminutive *-shoko*, and the attenuative *-tani*:

- (103) Mi-n-ra papashoko raro-tani a-ke.
 2-ERG-EV grandfather:ABS (become)happy-ATT make-COMPL
 'You made grandfather a little bit happy.'
- (104) E-n-ra tapo keyá-shoko a-ke.
 1-ERG-EV palm.bark.floor:ABS (become)high-DIM make-COMPL
 'I made the palm-bark floor somewhat high.'
- (105) E-n-ra xobo kikin ani-shaman ak-ai.
 1-ERG-EV house:ABS very (become)big-INTENS make-COMPL
 'I made the house quite large.'

Further evidence of the special syntactic status of /ak/ is given by the root *bata* '(become) sweet'. *Bata* allows for causativization through /ak/ and *-n*, thus resulting in the transitive 'sweeten'. While the former mechanism allows for insertion of the diminutive *-shoko* directly after the root, the same is not possible with *-n*:

- (106) a. E-n-ra xeati bata a-ke.
 1-ERG-EV drink:ABS (become)sweet make-COMPL
 b. E-n-ra xeati bata-n-ke.
 1-ERG-EV drink:ABS (become)sweet-TRNZ-COMPL
 'I sweetened the drink.'
 c. E-n-ra xeati bata-shoko a-ke.
 1-ERG-EV drink:ABS sweet-DIM make-COMPL
 d. *E-n-ra xeati bata-shoko-n-ke
 1-ERG-EV drink:ABS sweet-DIM-TRNZ-COMPL
 'I sweetened the drink a little bit.'

Therefore, in formal terms, causativization through /ak/ differs from other similar processes in SK. The /ak/ causative construction may be analyzed as a kind of compound predicate, comparable to the French *faire* causative construction; the

latter, despite occurring next to the caused predicate in most cases, allows for some adverbs and the negative to occur in-between.³⁸

3.4 Causativization and the determination of reference

According to Weber (1989:306; see also pp. 12, 292–293) in Huallaga Quechua reference-marking applies prior to causativization; that is, reference-markers must combine with the base predicates rather than with the causativized predicates. In SK, reference-marking is determined in terms of the cause predicate. In the following complex sentence, each clause contains a causal predicate, expressed through the auxiliary *ak-* and the suffix *-ma*, respectively. In both clauses, the subject of the basic intransitive predicate is the sugar cane juice and the subject of the causativized predicate a third person plural participant. Therefore, the mere use of a same-subject marker would not make it clear whether establishment of reference applies before or after causativization. Nevertheless, recall from Section 2.3.2 that SK same-subject markers additionally code the transitivity status of the matrix clause, and thus the presence of *-xon* indicates that the corresponding matrix clause is necessarily transitive. In other words, in (107) below, it is clear that causativization takes place prior to reference-marking:

- (107) ... xawi jene kobin a-xon pae-ma-kan-a iki.
 sugar.cane juice:ABS boil-PSST become.sour-CAUS-PL-PP2 AUX
 ‘... they boiled the cane juice and let it ferment.’

In the following sentence, the use of the same-subject marker *-ax* indicates that the participants going to Caco are coreferential with the causers of the first clause; hence causativization is prior to reference-marking, again:

- (108) Rabi beno-ma-[a]x-ra Kako-nko bo-kan-ke.
 Rabi:ABS get.married-CAUS-PSSI-EV Caco-ALL go.PL-PL-COMPL
 ‘After making Rabi get married, they went to Caco (maybe with Rabi and her husband too).’

The morpheme *-a* indicating object-to-subject coreference also shows that in the example below causativization occurs prior to the establishment of reference:

- (109) Tita betan papa-n beno-ma-a-ra Rabi
 mother CONJ father-ERG get.married-CAUS-PO>S/A-EV Rabi:ABS
 Kako-nko ka-ke.
 Caco-ALL go-COMPL
 ‘After mother and father made her get married, Rabi went to Caco.’

4. Semantic distinctions

This section deals with two types of semantic distinctions involving causativization. Firstly, I examine the use of alternate strategies in coding direct versus indirect causation, discussing the semantic specifications that may be involved in the given distinction. Secondly, I discuss the restrictions on the use of a given causativization mechanism, that I view as particularly associated with the degree of animacy of the causee, and hence its potential for being an initiator of the caused event.

4.1 Direct versus indirect causation

So far, I have focused on constructions in which different causativizing morphemes can be analyzed as occurring in complementary distribution depending, roughly, on the nature of the predicate to which they are attached. However, not surprisingly, SK has alternate ways to causativize the same basic predicate. It has been widely argued that alternate causative constructions are semantically nonequivalent since they reflect differences in the conceptualization of a given extra-linguistic situation; it is this difference in conceptualization that leads to alternate grammatical construals (Fodor 1970; Shibatani 1976:28–38; Hetzron 1976; Wierzbicka 1980; Cole 1983; Haiman 1983; Lemmens 1998:21; *inter alia*). The various semantic distinctions have been subsumed in the familiar opposition between “direct” versus “indirect” causation, for which Kemmer & Verhagen (1994:120) offer the following parameters: physical vs. nonphysical, direct vs. mediated, and cause per se vs. enablement and permission. In turn, Dixon (2000:61–78) proposes an elaborate set of nine partially interdependent parameters found crosslinguistically. First, a distinction is made between states and actions. Next, control, volition and affect-ness in relation to the causee are discussed. In relation to the causer, the parameters identified are directness, intention, naturalness, and involvement. Finally, Shibatani & Pardeshi (this volume) establish the distinction between direct vs. indirect causation in terms of two basic causative situations, from which secondary, prototypical manifestations may be derived. These two situations are dependent on the way the causee is conceptualized; thus, direct causation is defined as a situation involving an agentive causer and a patientive causee, while in an indirect causation situation both the causer and the causee are agentive participants. Generalizing, less productive regular causatives correlate with direct causation, whereas more productive regular ones correlate with indirect causation.

In SK it is possible to code direct as opposed to indirect causation by selecting different causativizing mechanisms. A second possibility is a construction which combines detransitivizing and transitivizing processes on the same stem; arguably, in order to decrease the force-dynamics of an inherently direct causative, to further

assign it an enablement meaning. Furthermore, there are sets of more than two alternate constructions involving lexical and morphological changes.

4.1.1 *Alternate causativizers*

In Section 3, *-ma* was characterized as the more general causativizer, both in terms of its distribution as well as of the range of causation types it can encode; in addition, *-ma* is the only causativizer that can occur recursively. It will be shown here that, when alternate causative constructions are possible, it is the one containing *-ma* that will express the least direct type of causation. To return to a classic example, the verb stem *mawá-ma-* ('die' + *-ma*) is best translated as to 'let someone die,' and not as to 'kill.' For instance, *mawá-ma-* would be appropriate when somebody is taking care of a sick person and this person dies. The idea of 'kill' is expressed through a different verb root, *rete-*:³⁹

- (110) E-n-ra nokon bake mawá-ma-kean⁴⁰-ke ishton
 1-ERG-EV POSS1 child:ABS die-CAUS-almost-COMPL quickly
 meráya-iba bo-yama-xon.
meráya-chezative carry-NEG-PSST
 'I almost caused my son to die, by not taking him to the *meráya* quickly.'
- (111) E-n-ra misho rete-kean-ke nokon kawá pi-ketian.
 1-ERG-EV cat:ABS kill-almost-COMPL POSS1 wrapped:ABS eat-PDS
 'I almost killed the cat for having eaten my wrapped (cooked fish).'

A similar distinction is found in alternate constructions with *-ma* and */ak/*. It seems to be always the case that the expressions containing *-ma* code less direct causation than those containing */ak/*. Thus, in the examples below, the stem *benxo-ma-* is given a mediative interpretation 'to have someone cured (by somebody else)', for example by taking her/him to the shaman; as opposed to the direct *benxo a(k)-* 'to cure somebody' (e.g., if one is a shaman or knows how to use plants):

- (112) No-n onan-ya-bo-iba noa isin-aitian
 1PL-GEN knowledge-PROP-PL-*chezative* 1PL:ABS get.sick-SDS
 bo-xon noa **benxo-ma-i** /***benxo a-**[a]i
 goPL/T-PSST 1PL:ABS get.well-CAUS-INC
 'When we get sick they (our parents) take us to the medicine man and have us cured.'
- (113) Ikaxbi ja-ska-ra jakon-ma shinan-ya joni-bo no-n
 but that-COMP-EV good-NEG think-PROP person-PL:ABS 1PL-ERG
benxo a-ti atipan-ke rao-n-xon. /***benxo-ma-ti**
 get.well make-INF can-COMPL medicine-TRNZ-PSST

‘But we can cure this kind of bad men by treating them with (plant) medicine.’

- (114) Nokon bene mee-mis i-ketian-ra e-n nokon
 POSS1 husband:ABS touch-HAB:AGTZ be-PDS-EV 1-ERG POSS1
 tita rao-n-ma-ke.
 mother:ABS medicine-TRNZ-CAUS-COMPL
 ‘Since my husband used to beat me, I had my mother cure him with
 (plant) medicine (in order to change his behavior).’

What the female speakers are referring to in (113) and (114) is that, according to Shipibo culture, men with a bad behavior can be made to change by having them drink, without them realizing, a beverage containing the appropriate plant medicine.

In (115) and (69), the latter repeated here as (116), we have two noun roots in predicative function; *xono*, ‘(become) *lupuna* tree’ is further causativized by /ak/, while *yoshin* ‘(become) spirit’ takes *-ma*:

- (115) Binpish jamá-xon-ronki awakan xono
 guayaba:ABS kick-PSST-HSY tapir:ERG (become) *lupuna*
 a-ni-ke.
 make-REM-COMPL
 ‘Kicking the guayaba (tree), the tapir turned it into a *lupuna* (tree).’
- (116) ... nishi xea-xon-ki Iskon Niwe-n jawen yora
 rope:ABS drink-PSST-HSY2 Iskon Niwe-ERG POSS3 body:ABS
 yoshin-ma-[a]i, saki-saki-i i-non kaman.
 (become)spirit-CAUS-INC tremble.tremble-SSSI be-PDS LIM
 ‘... drinking the *ayahuasca*, Iskon Niwe made his body turn into spirit
 until it trembled repeatedly.’

From the sentence context in (115), it is clear that the tapir caused the transformation unintentionally and was even unaware of the potential consequences of its kicking the guayaba tree. In contrast, in (116) the shaman intentionally and consciously drank ayahuasca in order to perform his duty. However, while the tapir acts by itself, when the shaman drinks ayahuasca it is actually the spirit of the plant that is conceptualized as the active participant. Therefore, up to this point it could be said that *-ma* corresponds to mediative causation while /ak/ and *-n* encode direct causation (notice however that this analysis contradicts the intentionality parameter in (115) and (116)).

Nevertheless, the mediative vs. direct causation analysis does not hold when examining further examples involving alternate causativizers. Thus Lorient, Lauri-ault & Day (1993:417) register two alternate causatives for the intransitive root

tsasi- ‘stop’, *tsasi a-* and *tsasi-ma*. The authors state that although both forms can be translated as ‘stop (tr.)’, *tsasi a-* “implies an intercepted object,” for example a canoe being brought down by the water, while *tsasi-ma-* rather “refers to the fact of stopping the movement, e.g., of a horse...” (my translation). In this case, neither intentionality nor direct (as opposed to mediative) causation or physical vs. nonphysical action appear to play a role. Instead, there is a significant and obvious difference in the degrees of animacy and agentivity of the causees.

In Section 3.2, I characterized /*ak/* as the corresponding causativizer for adjective-inchoative stems. Thus, a root such as *ani* ‘(become) big, grow’ most frequently combines with /*ak/* in order to obtain the corresponding causative ‘raise’ (see also examples (29) and (40)). However, in Section 3.3, I mentioned that the root *ani* may also take the general causative suffix *-ma*, again with a somewhat different meaning. Thus compare the following sentence pair:

- (117) a. E-n-ra bake **ani a-**[a]i.
 1-ERG-EV child:ABS grow make-INC
 ‘I raise the child’.
- b. E-n-ra bake **ani-ma-**ai.
 1-ERG-EV child:ABS grow-CAUS-INC
 ‘I make/help the child grow (taking special care of her/him; e.g. by giving her/him special food or vitamins).’ (Valenzuela 1997:108)

The adjective-inchoative root *xana* ‘(become) hot’ exhibits a similar alternation:

- (118) a. E-n-ra onpax **xana a-**ai.
 1-ERG-EV water:ABS (become)hot make-INC
 ‘I heat the water (put it on the fire and probably leave it).’
- b. E-n-ra onpax **xana-ma-**ai.
 1-ERG-EV water:ABS (become.hot)-CAUS-INC
 ‘I heat the water (taking constant care of it, by using a fan to keep the fire high, etc.).’ (Valenzuela 1997:109)

(117) and (118) above can be interpreted in the following way: the use of /*ak/* implies that the causer is conceptualized as bringing about the corresponding change of state of the causee, and thus the latter is construed as a patientive participant; with the addition of *-ma*, on the other hand, the causer is rather seen as someone contributing to make an imminent process take place faster, better, or to a greater degree. This analysis is supported by the evidence given in exx. (137) and (138) in 4.2. Again, parameters such as intentionality, mediativeness, or physical intervention do not seem relevant. Interestingly, in the cases of alternate constructions involving *-ma* and /*ak/*, it is the causativizer exhibiting more structural independence (cf. Section 3.3) and that being etymologically transparent the one which encodes a more direct type of causation. Moreover, /*ak/* can be said to be less pro-

ductive and regular with respect to *-ma*. Therefore, there seems to be a mismatch between conceptual and structural integration.

As for the cases where an alternation between *-ma* and *-n* has been attested, the same basic distinction applies, in that the construction containing *-n* entails a more direct kind of causation with respect to *-ma*. In the following examples, *nee-n-* is often interpreted by native speakers as a situation involving physical contact and a rather patientive causee, while the one containing *-ma* allows for an inductive reading, and therefore requires a more agentive causee:

- (119) a. E-n-ra bake nee-n-ke jiwi bochiki.
 1-ERG-EV child:ABS on.top.position-TRNZ-COMPL tree up
 ‘I put the child up on the tree (I hold the child and put in on the tree).’
- b. E-n-ra bake nee-ma-ke jiwi bochiki.
 1-ERG-EV child:ABS on.top.position-CAUS-COMPL tree up
 ‘I caused the child to go up on the tree (e.g., by asking her/him to do it).’

It is also possible to exploit the availability of different causativizers in order to achieve disambiguation in cases where the base predicate has two potential meanings. For example, the adjective *menkó* is ambiguous, since it means ‘upside down’ but also ‘laying (hen)’. When causativizing this root, *menko-n-* is used to mean ‘put someone upside down’, while *menkó-ma-* means to ‘place a hen in its nest so that it lays eggs’ (Loriot, Lauriault & Day 1993:259). Alternative causativizers are also used to obtain different verbs from a single unambiguous root. For example, *bake* ‘child’ can be combined either with *-n* to get *bake-n-* ‘deliver a child’ or with /ak/ (as in example (29)) to obtain *bake a-* ‘engender/have a child’ (see also Table 9). In general, it can be said that *-n* has a more physical meaning.

4.1.2 *The detransitivizing strategy*

In addition to the selection of different causativizers, it is possible to encode the distinction between direct versus indirect causation by employing the same transitive root. In this option, direct causation is expressed by the bare root, while indirect causation requires two morphosyntactic processes. Firstly, the root is detransitivized or decausativized (see Table 1); secondly, the detransitivized stem is causativized by means of the general causativizer *-ma* (Table 2). Again, it is the construction containing *-ma* the one encoding indirect causation. Thus, the literal meaning of this construction seems to be ‘to allow someone, something to undergo the change of state expressed by the decausativized stem’.

In the following examples, the speaker talks sadly about the loss of Shipibo traditional knowledge. The direct use of the transitive *keyo-* ‘finish, kill, exterminate’, refers to a more active involvement on the part of the causer, who provokes the

caused event; on the other hand, *keyó-ma-* expresses a less agentive participation of the causer, and an event which seems to take place independently:⁴¹

- (120) ... noa no-n-a-bi jawéki-bo keyó-ma-i
 1PL:ABS 1PL-GEN-NOMI-EMPH thing-PL:ABS finish:DTRNZ-CAUS-SSSI
 i-t-ai. Ja-ska-ra i-xon no-n Ani Xeati
 be-PROG-INC that-COMP-EV be-PSST 1PL-ERG Ani Xeati:ABS
 oin-yam-ai, no-n be-sté-kan-ai-bo oin-yam-ai,
 see-NEG-INC 1PL-ERG forehead-cut:DTRNZ-PL-PP1-PL:ABS see-NEG-INC
 no-n mashá i-kan-ai-bo oin-yam-ai. Rama-tian
 1PL-ERG *mashá*.perform-PL-PP1-PL:ABS see-NEG-INC now-TEMP
 noa jawe-oma-bi... no-n bake-bo jawe-bi
 1PL:ABS what-PRIV-EMPH 1PL-GEN child-PL:ABS what-EMPH
 onan-ma iki...
 knower-NEG COP
 ‘... we are letting our customs disappear. Thus, we don’t see any *Ani Xeati*
 ceremony, we don’t see the cutting of the girls’ fringe, we don’t see those
 who perform the *mashá* (traditional chants and dance). Nowadays we
 have absolutely nothing... our children are completely ignorant of this...’

Continuing her analysis, the speaker finds reasons to blame the Shipibo themselves for the loss of their traditional culture. Specifically, she thinks that the Shipibo could overcome the process of culture loss if they chose to do so. In this more stronger statement, almost an accusation, the bare root *keyo-* is used instead. Notice also the use of the emphatic pronoun *nonbi* ‘we ourselves’:

- (121) Noa-ra jakiribi i-ti atipan-ke ne-skat-i, ikaxbi
 1PL:ABS-EV again be-INF can-COMPL this-COMP-I but
 no-n-bi-kaya-ra no-n axé-bo keyo-i
 1PL-ERG-EMPH-instead-EV 1PL-GEN custom-PL:ABS finish-SSSI
 i-t-ai... joxo nawa-bo-res no-n onan-ma-[a]i.
 be-PROG-INC white outsider-PL:ABS-just 1PL-ERG know-CAUS-INC
 Ja-tian ja-bo-res no-n yo-i ka-[a]i, ja-tian moa
 that-TEMP 3-PL:ABS-just 1-ERG tell-SSSI go-INC that-TEMP already
 noa ja-ska-ra-ton shinan-benot-ai.
 1PL:ABS that-COMP-EV-OBL think-fail-INC
 ‘We could practice this again, but instead, we ourselves are finishing with
 our customs... we only show it to the white outsiders. Then, we tell only
 them, and we are forgetting these things already.’

The following pair of examples further illustrate the semantic distinction between a bare transitive root and its *-ma*-marked detransitivized counterpart. In sentence (122) (previously cited as (45)) *menó-ma-* refers to a regrettable involuntary action, an accident, while *meno-* is a purposeful action in order to comply with the custom of burning or just abandoning the house following somebody's death:

- (122) E-n-ra xobo **menó-ma-ke** mari bina
 1-ERG-EV house:ABS burn:DTRNZ-CAUS-COMPL mari wasp:ABS
 meno-kas-kin.
 burn-DES-SSST
 'I caused the house to burn wanting to kill the wasp.'
- (123) E-n-ra nokon xobo **meno-ke** jainoa-x nokon
 1-ERG-EV POSS1 house:ABS burn-COMPL there:ABL-I POSS1
 papa mawá-ketian.
 father:ABS die-PDS
 'I burnt my house because my father died there.'

Further examples are the pairs *rate-/raté-ma-* and *payo-/payó-ma-*:

- (124) a. E-n-ra bake **rate-ke**.
 1-ERG-EV child:ABS scare-COMPL
 'I scared the child (by hiding in the dark and coming out suddenly).'
- b. E-n-ra bake **raté-ma-ke**.
 1-ERG-EV child:ABS scare:DTRNZ-CAUS-COMPL
 'I let the child get scared' (e.g., I left the child alone, and while I was away the child got scared; I feel responsible about it).
- (125) a. E-n-ra chopa **payo-ke**.
 1-ERG-EV clothes:ABS make.something.look.old-COMPL
 'I wore out my clothes (through the normal daily use).'
- b. E-n-ra chopa **payó-ma-ke**.
 1-ERG-EV clothes:ABS make.something.look.old:DTRNZ-COMPL
 'I let my clothes become worn out (by not taking appropriate care of them, by leaving them for too long in the water when washing, etc.).'

4.1.3 Combined strategies

It is possible to have not just pairs but even larger sets of alternate causative constructions as in:

Table 7. Combinations of the root *pake-*

<i>pake-</i>	‘drop, throw, bring down’	transitive bare root
<i>paké-</i>	‘fall, come down, get off’	root + detransitivization
<i>paké-ma-</i>	‘cause to fall, come down, get off’	root + detransitivization + <i>-ma</i>
<i>pota-</i>	‘leave, throw, abandon’	suppletion

The form *paké-* (in combination with the imperative) may be used when directly ordering or asking a person or a dog to come down from a tree, a hammock or house,⁴² or to get off a canoe; *paké-ma-* would then be used to report one’s order or request. It is not generally acceptable to use *paké-ma-* when reporting a causative situation involving an inanimate causee such as money or a cup (the case of a fruit is different, since fruits can fall by themselves). *paké-ma-* may also be used in a situation when one is in charge of a child and, while being busy in other tasks, the child falls to the ground; or, if one is swinging a hammock and the child falls from it. Generalizing, *paké-ma-* implies that the speaker feels responsible for the result, although s/he has not provoked it directly.

In turn, *pake-* is preferably used when one acts physically on a child bringing it down from a tree, when one swings the hammock hard causing the child to fall, or if one turns over the canoe and as a result the dog falls; the last two situations may be purposeful or not. Also in the last two cases, speakers allow the use of *paké-ma-*:

- (126) a. E-n-ra bake paké-ma-ke, yono-xon.
 1-ERG-EV child:ABS bring.down:DTRNZ-COMPL order-PSST
 b. *E-n-ra bake pake-ke, yono-xon.
 ‘I had the child come down by ordering her/him.’
- (127) a. E-n-ra bake xobo-nko-nia
 1-ERG-EV child:ABS house-LOC-ABL
 paké-ma-ke, onpax bi-i ka-xon.
 bring.down:DTRNZ-CAUS-COMPL water:ABS get-SSSI go-PSST
 b. *E-n-ra bake xobo-nko-nia pake-ke, onpax bi-i ka-xon.
 ‘I let the child fall from the house while going to get water.’

The English equivalents of the following sentences are, roughly: (128) ‘I caused the child to fall from the hammock’, (129) ‘I caused the dog to fall from the canoe’, and (130) ‘I caused the money to fall from (my) pocket.’:

- (128) a. E-n-ra bake paké-ma-ke
 1-ERG-EV child:ABS throw:DTRNZ-CAUS-COMPL
 weyóti-ain-oa.
 hammock-LOC-ABL

- b. E-n-ra bake pake-ke weyóti-ain-*oa*.
 1-ERG-EV child:ABS throw-COMPL hammock-LOC-ABL
- (129) a. E-n-ra ochíti paké-ma-ke nonti-mea.
 1-ERG-EV dog:ABS throw:DTRNZ-CAUS-COMPL canoe-LOC:ABL
- b. E-n-ra ochíti pake-ke nonti-mea.
 1-ERG-EV dog:ABS throw-COMPL canoe-LOC:ABL
- (130) a. ^{??}E-n-ra koríki paké-ma-ke borosicho-nko-nia.
 1-ERG-EV money:ABS throw:DTRNZ-COMPL pocket-LOC-ABL
- b. E-n-ra koríki pake-ke borosicho-nko-nia.
 1-ERG-EV money:ABS throw/drop-COMPL pocket-LOC-ABL

The distinction between the (a) and the (b) sentences is often interpreted as that between a purposeful as opposed to an accidental action on the part of the causer, as in (122) and (123).

Consider another example with an adjectival/inchoative root:

Table 8. Combinations of the root *pae-*

<i>pae-</i>	‘sour, become sour, ferment’	adjectival/inchoative bare root
<i>pae-n-</i>	‘get drunk’	root + <i>-n</i> (resulting stem is intransitive)
<i>pae-ma-</i>	‘let something ferment’	root + <i>-ma</i>
<i>pae-n a-</i>	‘get someone drunk’	root + <i>-n</i> (result is intransitive) + <i>/a(k)/</i>
<i>pae-n-ma-</i>	‘let someone get drunk’	<i>-n</i> (result is intransitive) + <i>-ma</i>

- (131) Nato xeati r-iki xawi jene kobin a-xon
 this drink:ABS EV-AUX sugar.cane juice:ABL boil-PSST
pae-ma-kan-a.
 (become)sour-CAUS-PL-PP2
 ‘After boiling the sugar cane juice they let this drink ferment.’
- (132) ... ja-n kikin-i **pae-n-kan-a** iki.
 3-INST very-I (become).sour-*n*-PL-PP2 AUX
 ‘... with it (sugar cane liquor) they got completely drunk.’
- (133) Moa a-ti nete xabat-aitian, nokon wetsa rabé
 already make-INF day clear-SDS POSS1 same.sex.sibling two:ABS
pae-n a-kan-a iki.
 (become)sour-TRNZ make-PL-PP2 AUX
 ‘When the day (to carry out the ritual) cleared, they got my two sisters drunk.’

- (134) Nokon xobo-n ka-xon-ra e-n jato
 POSS1 house-ALL go-PSST-EV 1-ERG 3PL:ABS
paen-ma-res-ke.
 get.drunk-CAUS-just-COMPL
 ‘I went home and just let them get drunk.’

The next instance involves a nominal inchoative root:

Table 9. Combinations of the root *bake*

bake	‘(become/behave like a) child’	nominal, inchoative bare root
bake-ma-	‘make someone become/behave like a child, treat someone like a child’	root + <i>-ma</i>
bake a-	‘engender/have a child’	root + <i>a</i>
bake-n-	‘deliver a child’	root + <i>-n</i>
bake a-ma-	‘make animals mate’	root + <i>a</i> + <i>-ma</i>

Finally, consider the following sentence:

- (135) Meráya-nin-ra ea namá-xon-ke nokon machíto e-n
meráya-ERG-EV 1:ABS dream.of-BEN-COMPL POSS1 machete 1-ERG
manó-ma-yantan-a.
 get.lost/out.of.sight-CAUS-PST3-PP2
 ‘The *meráya* dreamt, on my behalf, of the machete I had misplaced some time ago.’

In principle, the causative construction in (135) could be analyzed similarly to the combined strategies discussed above; that is, as a transitive root *mano-* meaning ‘to lose something’, followed by the detransitivizer and further causativized by *-ma*. Therefore, the expected way to obtain a corresponding direct causation equivalent would be by simply using the transitive root *mano-*. In fact, this transitive root is found in the language, but it bears the specialized meaning ‘to look for somebody by asking others’. A direct causation meaning could be obtained by using a different transitive root such as *pota-* ‘to abandon, throw’.

4.2 Semantic restrictions

As mentioned in Section 3.1 (see also Footnote 25), in SK forces and abstract entities such as an illness can be conceptualized and encoded as transitive subjects. Concrete, perceptible inanimates can be treated as transitive subjects when they are not seen as instruments but as ultimate causes (67). As pointed out in DeLancey

(1984: 181), although both forces and instruments lack volition, the latter are under external control of an agent while the former are not. For example, in SK one could say that a particular fruit hit Yoi on the head, but it supposes that the fruit fell from the tree and not that somebody threw it against Yoi. This is comparable to what has been reported for Hare (Athabaskan), where a gun going off spontaneously can be encoded as transitive subject of the verb ‘kill’, while a gun put to work by an external causer cannot (DeLancey *ibid.*: 187).

Let us briefly look at the verb *chexa-* ‘ache’. This predicate is particularly interesting in that the participant that is the highest in the topicality and animacy scales plays the experiencer semantic role and can be seen as somewhat “affected,” while the stimulus involves a bodypart belonging to the same experiencer. Nevertheless, *chexa-* is expressed in the prototypical transitive schema, since it takes two arguments and requires an <ERG ABS> case-marking frame; here, the bodypart is encoded as transitive subject and the experiencer is coded as object. Consider the following example:

- (136) Ea xeta-n chexa-ketian-ra, e-n rokotoro
 1:ABS tooth-ERG ache-PDS-EV 1-ERG doctor:ABS
 tseka-ma-ke
 take.out-CAUS-COMPL

‘Because my tooth was aching, I had the dentist pull it out.’

(Valenzuela 1997: 144; see also Lorient, Lauriault & Day 1993: 162)

Sentence (136) has two clauses, a dependent and a main one. Since in SK ergative, instrumental/means and other obliques are marked in the same way (and objects as well as intransitive subjects occur unmarked), one could in principle analyze the first part of the sentence as an intransitive two-participant clause, with the experiencer being marked absolutive and the ‘tooth’ as some kind of oblique; i.e., roughly equivalent to the English ‘I am aching by means/because of my tooth’. However, notice that the first clause is marked for different-subject (i.e. *-ketian*), and the transitive subject in the second clause is clearly the first person singular; hence, the first clause subject is necessarily the tooth (cf. English ‘my tooth hurts me’).

Valenzuela (1997: 110–111, 230–232) noted semantic restrictions in the possibility of combining a given causativizer with certain base predicates, and interpreted it in relationship to the kind of causee involved. As mentioned when commenting on the distinction between *pake-* (‘bring down, throw, drop’) and *paké-ma-* (‘cause to come down, cause to fall’) in the section above, the latter form is not generally acceptable with a causee such as money (ex. 130). In contrast, *paké-ma-* may be used with a fruit as causee, given that fruits have the potential of falling by themselves. A similar situation is found in the following sentences illustrating the use of the same root with different causativizers:

- (137) a. E-n-ra bená a-[a]i soro. /bená ak-ai
 1-ERG-EV (become)new make-INC *sol*:ABS
 ‘I make the *sol* coin (look) new.’
- b. *E-n-ra soro bená-ma-ai.
 1-ERG-EV *sol*:ABS (become)new-CAUS-INC
 ‘I make the *sol* coin (look) new.’

But:

- (138) a. E-n-ra kaimito bimi-ma-ai.
 1-ERG-EV *caimito*:ABS (yield)fruit-CAUS-INC
 ‘I am taking care of the *caimito* (e.g. by treating it with snail egg or by not letting anybody touch it) till it yields fruit.’
- b. *E-n-ra kaimito bimi a-ai.
 1-ERG-EV *caimito*:ABS (yield)fruit make-INC
 ‘I made the *caimito* yield fruit.’

(137b) was considered unacceptable by several language consultants since it would imply that the coin has some possibility of becoming new by itself, without the subject’s intervention. This interpretation is consistent with the analysis of *-ma* (in these alternation contexts) as an indirect causation marker, that is with a situation where the causee is construed as an active participant. As for *bimi-* ‘yield fruit’, it was argued that it takes the causativizer *-ma* rather than */ak/*, given that trees yield fruit by themselves without requiring an external causer (Valenzuela 1997:110–111).⁴³ There are however, instances such as *raké a-* ‘frighten, threaten’ where the causativizer */ak/* is used with a human causee. Nevertheless, it could be argued that similarly to *bená a-* but differently from *bimi-ma-*, the event expressed by *raké a-* could not have taken place without the intervention of an external causer, or simply that it is possible to construe certain situations involving a potentially active causee in terms of a direct causation schema. In sum, although in Part 3 the distribution of the different causativizers was accounted for in terms of syntactic criteria (i.e., roughly, in terms of stem classes), finer analysis reveals the interaction of these formal properties with relevant semantic features.

Semantic restrictions are also observable in relation to the double auxiliarization strategy. The corresponding predicates are instances of onomatopoeic roots which combine with either the intransitive or the transitive auxiliary. The following pair can be taken as the pattern for these causatives. Observe that the root *jojo* plus the intransitive auxiliary *ik-* result in ‘bark’, while the combination of *jojo* with the transitive auxiliary *ak-* results in ‘bark at’, thus adding an object argument (Valenzuela 1997:229):

- (139) a. Ochíti-ra jojo ik-ai joni-bo kopí.
 dog:ABS-EV ONOM be/do-INC person-PL cause
 ‘The dog is barking because of the people.’
- b. Ochíti-nin-ra joni-bo jojo ak-ai.
 dog-ERG-EV man-PL:ABS ONOM make-INC
 ‘The dog is barking at the people.’
- c. E-n-ra ochíti jojo i-ma-[a]i joni-bo kopí.
 1-ERG-EV dog:ABS ONOM be/do-CAUS-INC person-PL cause
 ‘I make the dog bark because of the people.’
- d. E-n-ra ochíti joni-bo jojó a-ma-[a]i.
 1-ERG-EV dog:ABS person-PL:ABS ONOM make-CAUS-INC
 ‘I make the dog bark at the people.’
- e. *E-n-ra ochíti jojo ak-ai.
 1-ERG-EV dog:ABS ONOM make-INC
 ‘I make the dog bark.’⁴⁴

As seen in (139a) and (139b), the use of an onomatopoeic stem plus the auxiliaries *ik-* and *ak-* result in intransitive and transitive clauses, respectively, with the dog as S or A argument. The same is true for onomatopoeic predicates involving a human single or A participant such as *betsó* ‘kiss’ and *too* ‘shoot’, although in these cases combination with the intransitive auxiliary yields a reflexive sense (Table 3).

Similarly to the ‘dog’ case but differently from the situation found with humans, onomatopoeic predicates with other nonhuman participants result in a nonreflexive intransitive reading when the intransitive auxiliary is used:

- (140) a. Xena-ra tiash i-ke.
 worm:ABS-EV ONOM be/do-COMPL
 ‘The worm produced a noise *tiash* (e.g. when falling from a branch).’
- b. Atapa bachi xaká-ra moish i-ke.
 chicken egg shell:ABS-EV ONOM be/do-COMPL
 ‘The chicken egg shell produced a noise *moish* (e.g. when breaking).’
- c. Motóro-ra toko toko ik-ai.
 engine:ABS-EV ONOM be/do-INC
 ‘The engine is producing a noise *toko toko* (when starting or working).’

However, unlike dogs and humans, in these cases combination of the onomatopoeic stem and the transitive auxiliary (i.e., addition of an object argument) is not acceptable:

- (141) a. *Xena-n-ra tiash a-ke.
 worm-ERG-EV ONOM make-COMPL

- b. *Atapa bachi xakakan-ra moish a-ke.
 chicken egg shell:ERG-EV ONOM make-COMPL
- c. *Motoro-nin-ra toko toko ak-ai.
 engine-ERG-EV ONOM make-INC

A way to obtain a causative predicate is by adding *-ma* to the stem plus the intransitive auxiliary:

- (142) a. E-n-ra xena tiash i-ma-ke.
 1-ERG-EV WORM:ABS ONOM be/do-CAUS-COMPL
- b. E-n-ra atapa bachi xaká moish i-ma-ke.
 1-ERG-EV chicken egg shell:ABS ONOM be/do-CAUS-COMPL
- c. E-n-ra motóro toko toko i-ma-[a]i.
 1-ERG-EV engine:ABS ONOM be/do-CAUS-INC
 ‘I caused the worm/chicken egg shell/engine to produce a noise *tiash/moish/toko toko*.’

Or, by introducing an additional A participant and coding the base subject as object:

- (143) a. E-n-ra xena tiash a-ke.
 1-ERG-EV WORM:ABS ONOM make-COMPL
- b. E-n-ra atapa bachi xaká moish a-ke.
 1-ERG-EV chicken egg shell:ABS ONOM make-COMPL
- c. E-n-ra motóro toko toko a-ke.
 1-ERG-EV engine:ABS ONOM make-COMPL
 ‘I made the worm/chicken egg shell/engine produce the noise *tiash/moish/toko toko* (e.g., by stepping on it, by starting it, etc.).’

Although the examples presented here by no means exhaust the range of onomatopoeic verbs available in SK, the data examined so far suggests different combination properties of these predicates in association with the degree of animacy and potential agentivity of the base S or A participant involved.

5. Adverbial scope and transitivity

5.1 Adverbial scope and causativization

Differences in the domain of application of adverbials have been used as arguments in the discussion on whether or not lexical causatives derive from underlying periphrastic expressions (Hochster 1974; Shibatani 1976: 9–13). The SK data discussed in the prior section strongly support the functional-cognitivist principle

according to which, when languages have alternate causal structures (regardless of their formal nature; i.e., lexical, morphological or syntactic), these correspond to differences in the conceptualization of what can be seen as roughly the same objective event. Nevertheless, the interaction of causative constructions and adverbial scope is worth investigating beyond the derivation question. Hence, from a typological perspective, one could investigate the means that languages have available for disambiguating or unambiguously signaling the portion of the construction to which a given adverbial applies. These strategies include: word or morpheme order, intonational pattern,⁴⁵ different kinds of reference-tracking devices, and formal differences of the kind *klugerweise/klug* in German and Dutch (Dik et al. 1990: 36–37). For example, Fodor (1970) points out that while in sentence (144a) the adverbial ‘by swallowing his tongue’ can apply to either the cause predicate or just the caused portion of the expression, in (144b) the adverbial applies to the cause predicate only:

- (144) a. John caused Bill to die by swallowing his tongue.
 b. John killed Bill by swallowing his tongue.

In a different kind of language, the ambiguity in the scope of such adverbials, even when a periphrastic causative is involved, could be solved, for instance, through the use of same or switch-reference markers. Sentence (145) contains the already introduced adverbial *imakaskinmabi*, the closest equivalent to the English ‘involuntarily, against somebody’s will’:

- (145) Tita-n-ra Chonon Biri bewa-ma-ke,
 mother-ERG-EV Chonon Biri:ABS sing-CAUS-COMPL
 i-ma-kas-kin-ma-bi.
 do-CAUS-DES-SSST-NEG-EMPH
 ‘Mother_i made Chonon Biri_j sing against her_j will (lit. without wanting to cause it).’

In principle, it seems plausible to apply this adverbial either to the base predicate (i.e., Chonon Biri didn’t want to sing) or to the cause predicate (the mother didn’t want to make Chonon Biri sing). But unlike the English ‘against her will’ in the free translation, *imakaskinmabi* is not ambiguous in SK, since the selection of same-subject marking and the presence of the causativizer *-ma* disambiguate the scope of the adverbial clause. In contrast, in (146) below, a semantically equivalent adverbial applies to the caused event, and therefore different-subject marking is used instead:

- (146) Ja-tian ja xontako jawen tita-n
 that-TEMP that unmarried.girl:ABS POSS3 mother-ERG
 xoi meni-ma-[a]i keen-yam[a]-ain-bi...
 roasted.meat/fish:ABS give-CAUS-INC want-NEG-SDS-EMPH

‘Then, her_i mother_i made the unmarried girl_i give roasted meat/fish (to the man who had asked her_i in matrimony) even though she_i didn’t want to...’

Another instance of how a language can disambiguate the scope of an adverbial in a causative construction is the use of gender agreement, as in the following Spanish sentences (woman speaking about a man):

- (147) a. Le hice pag-ar la cuenta por tont-o.
3:OBJ made:1SUB pay-INF the bill because stupid-MASC
‘I made him pay the bill because he is stupid.’
b. Le hice pag-ar la cuenta por tont-a.
3:OBJ made:1SUB pay-INF the bill because stupid-FEM
‘I made him pay the bill because I am stupid.’

While the preferred interpretation for (147a) is that the reason why the man paid the bill is his own stupidity, (147b) means that it was stupid from the part of the woman to make him pay the bill.

On the other hand, in the Hindi examples below, according to its position ‘slowly’ can apply only to the result predicate as in (148a) or to the whole sentence as in (148b) (from Olphen 1975: 199; see also Kulikov 1993: 146–147)⁴⁶:

- (148) a. Admî-ne mâtâ-se bacce-ko dhîre khil-vâ-yâ
man-ERG mother-INST child-DAT slowly eat-CAUS.INDIR-PAST
‘The man had the mother feed the child slowly.’
b. Admî-ne dhîre mâtâ-se bacce-ko khil-vâ-yâ
man-ERG slowly mother-INST child-DAT eat-CAUS.INDIR-PAST
‘The man slowly had the mother feed the child.’

An instance of a language using morpheme order to signal the different scopes of adverbials in causative constructions is Asheninka (Payne, this volume).

As shown in sentences (110) and (111), repeated here as (149) and (150), the adverbial modification ‘almost’ is coded as a suffix attached to the verb stem in SK:

- (149) E-n-ra nokon bake mawá-ma-kean-ke ishton
1-ERG-EV POSS1 child:ABS die-CAUS-almost-COMPL quickly
meráya-iba bo-yama-xon.
meráya-chezative carry-NEG-PSST
‘I almost caused my son to die for not taking him to the *meráya* quickly.’
(150) E-n-ra misho rete-kean-ke nokon kawá pi-ketian.
1-ERG-EV cat:ABS kill-almost-COMPL POSS1 wrapped:ABS eat-PDS
‘I almost killed the cat for having eaten my wrapped (cooked fish).’

Given the information in the causal clause, the domain to which *-kean* applies is unambiguous in the former example; i.e., I did something (waiting a long time before taking my son to the *meráya*) that almost caused my son to die. The latter sentence however seems ambiguous, probably in the same ways as the English ‘John almost killed Harry’ (Shibatani 1976:9):

- (151) a. John almost did something that could have killed Harry.
 b. John did something that almost caused Harry to die.
 c. John did something that caused Harry to become almost dead.

As for the adverb *ishton* in (149), its domain of application is unambiguously established by its position in the sentence.

In what follows, I will deal with a strategy that appears to be very peculiar to SK (and possibly Panoan in general); namely, the possibility of using transitivity agreement as a means to disambiguate the domain of application of some adverbials.

5.2 Adverbial scope and transitivity agreement

As shown in Section 2.3.1, intraclausal locative adverbials exhibit different endings depending on the transitivity status of the predicate. Therefore, in the intransitive clauses below only the locative adverbial forms *tapon*, *bachin*, and *nii meran* are possible; their transitive counterparts *tapon-xon*, *bachin-xon*, and *nii meran-xon* would yield ungrammatical sentences:

- (152) Nokon ochíti-ra **tapo-n** ransa-[a]i.
 POSS1 dog:ABS-EV palm.bark.floor-LOC dance-INC
 ‘My dog is dancing on the palm-bark floor.’
- (153) Nokon bake-ra **bachi-n** oxa-[a]i.
 POSS1 child:ABS-EV mosquito.net-LOC sleep-INC
 ‘My child is sleeping in the mosquito net.’
- (154) Nokon ochíti-ra jojo ik-ai **nii meran**.
 POSS1 dog:ABS-EV bark-INC forest inside
 ‘My dog is barking in the forest.’

However, when causativizing the intransitive root *ransa-* ‘dance’, both the intransitive and the transitive locative adverbial forms are possible:

- (155) a. E-n-ra nokon ochíti ransa-ma-[a]i **tapo-n**.
 1-ERG-EV POSS1 dog:ABS dance-CAUS-INC palm.bark.floor-LOC
 ‘I make my dog dance on the palm-bark floor.’

- b. E-n-ra nokon ochíti ransa-ma-[a]i **tapo-n-xon.**
 1-ERG-EV POSS1 dog:ABS dance-CAUS-INC palm.bark.floor-LOC-T
 ‘I make my dog dance on the palm-bark floor.’

As expected, sentences (155a) and (155b) entail a difference in meaning. The former implies that the dog is on the palm-bark floor but the causer is not. On the other hand, its (b) counterpart indicates that it is the causer who is on the palm-bark floor. That is, the intransitive adverbial *tapon* refers to the location of the effect predicate subject only, while the transitive *tapon-xon* refers to the location of the cause predicate subject and it is usually understood that the subject of the caused event is within the same scope. A similar distinction in adverbial scope is found in the following alternative sentences:

- (156) a. E-n-ra nokon bake oxa-ma-[a]i **bachí-n.**
 1-ERG-EV POSS1 child:ABS sleep-CAUS-INC mosquito.net-LOC
 ‘I make my child sleep in the mosquito net.’
 b. E-n-ra nokon bake oxa-ma-[a]i **bachí-n-xon.**
 1-ERG-EV POSS1 child:ABS sleep-CAUS-INC mosquito.net-LOC-T
 ‘I make my child sleep in the mosquito net.’

In (156a), it is indicated that the place where the child sleeps is the mosquito net; (156b) specifies that, being both participants in the mosquito net, the causer puts the child to sleep. Similarly, (157a) indicates that the causer stays somewhere else but sends her/his dog to the forest to bark (at animals). In (157b), both the causer and the dog are in the forest and the causer makes the dog bark (at animals):

- (157) a. E-n-ra nokon ochíti jojo i-ma-[a]i **nii meran.**
 1-ERG-EV POSS1 dog:ABS bark-CAUS-INC forest-inside
 ‘I make my dog bark in the forest.’
 b. E-n-ra nokon ochíti jojo i-ma-[a]i **nii meran-xon.**
 1-ERG-EV POSS1 dog:ABS bark-CAUS-INC forest-inside-T
 ‘I make my dog bark in the forest.’

The next pair of sentences is particularly interesting, since in this instance both cause and result are expressed in a single root; that is, through a pure lexical causative (cf. Table 1). Also in this situation an alternation in the adverbial forms is attested:

- (158) a. Rawa-n-ra machító jone-ke **nonti-n.**
 Rawa-ERG-EV machete:ABS hide-COMPL canoe-LOC
 ‘Rawa hid the machete in the canoe.’ (only the causee was in the canoe)

- b. Rawa-n-ra machito jone-ke nonti-n-xon.
 Rawa-ERG-EV machete:ABS hide-COMPL canoe-LOC-T
 ‘Rawa hid the machete in the canoe.’ (also the causer was in the canoe)

In example (24), repeated here as (159), we find an intransitive verb of body posture transitivized by *-n*. This sentence also contains a locative-allative adverbial, *ani nontin*. Notice that the adverbial occurs in its nontransitive form although the causativized predicate is transitive (the transitive form would be *ani nontin-xon*):

- (159) Ja-tian **ani nonti-n** westíora atsa xeati chomo
 that-TEMP big canoe:LOC/ALL one manioc drink jar:ABS
 na-yása-n-kan-ai.
 interior-sitting.position-TRNZ-PL-INC
 ‘Then, they put a jar of manioc beer inside the big canoe.’

Thus, the intransitive form of the adverbial in (159) specifies that it is the jar that is put inside the big canoe, and not that, while being in the middle of the canoe, the people placed the jar in it. Compare (159) with (160) below, where both the people drinking the manioc beer and the drink are located inside the big canoe:

- (160) a. ...**ani nonti-n-xon** westíora atsa xeati chomo
 big canoe-LOC-T one manioc drink jar:ABS
 keyo-kan-ke.
 finish-PL-COMPL
- b. *...**ani nonti-n** westíora atsa xeati chomo
 big canoe-LOC one manioc drink jar:ABS
 keyo-kan-ke.
 finish-PL-COMPL
 ‘... they finished a jar of manioc beer in the big canoe.’

A similar analysis applies to the clausal complement in the sentence below. Although the clause in brackets is transitive, the locative adverbial *tapon* occurs in its nontransitive form. Therefore, what the message expresses is that the adults should place the children up on the palm-bark floor to protect them from the dangerous white-lipped peccaries. It does not mean that the parents should be up on the palm-bark floor before placing their children there:

- (161) Jain-xon Ashi-n jato yoiy-a iki, [bake-bo bochiki
 there-T Ashi-ERG 3PL:ABS tell-PP2 AUX child-PL:ABS up
tapo-n nee-n-ti] yawa be-ax
 floor-LOC/ALL on.top-TRNZ-INF:ABS w.l.peccary:ABS come.PL-PSSI
 onsát-aitian.
 (become)dangerous-SDS

‘Then Ashi told them to place the children up on the palm-bark floors since the white-lipped peccaries would come and they could be dangerous.’ (PFMB 1995:28)

The possibility of applying both the nontransitive and the transitive adverbial counterparts in the constructions above suggests that, even in synthetic and sublexical causativization, the morphosyntax of the language is distinguishing two levels of predication, corresponding to the complex internal structure of the event. In this respect, causativized constructions do not seem to resemble any other kind of construction in the language corresponding to simple unitary events.

Similar alternative constructions were not possible with the adverbial ‘three times’ (cf. Shibatani 1976:15). The following sentences show that the forms *kimishai* and *kimisha akin* are used as intransitive and transitive agreement adverbials, respectively:

(162) Bake-ra choron-ke kimisha-i.
child:ABS-EV jump-COMPL three-I
‘The child jumped three times.’

(163) Ochíti-nin-ra bake natex-ke kimisha a-kin.
dog-ERG-EV child:ABS bite-COMPL three make-T
‘The dog bit the child three times.’

However, in a causativized sentence like (164a), only the transitive form is possible:

(164) a. Sani-n-ra bake choron-ma-ke kimisha a-kin.
Sani-ERG-EV child:ABS jump-CAUS-COMPL three make-T
‘Sani made the child jump three times.’

The construction above seems to imply that both events, Sani’s manipulation of the child and the child’s jumping, took place three times. In contrast, the intransitive adverbial counterpart *kimishai* cannot be applied to modify the base predicate of a causativized construction:

b. *Sani-n-ra bake choron-ma-ke kimisha-i.
Sani-ERG-EV child:ABS jump-CAUS-COMPL three-I
‘I made the child jump three times (I told him once to jump three times).’

When asked for a way to specify that Sani’s action took place only once in such a way that the child jumped three times, a language consultant offered the alternative below where the adverbial ‘three times’ applies to the effect predicate only:

- (165) E-n-ra bake yoi-ke (westíora a-kin-bicho) kimisha-i
 1-ERG-EV child:ABS tell-COMPL one make-SSST-only three-I
 choron-ti.
 jump-INF:ABS
 ‘I told the child (once) to jump three times.’

This asymmetry cannot be accounted for in terms of the core construction type, properties of the base predicate or semantic roles of the arguments; in these respects, sentence (164b) is equivalent to sentences (155a) and (157a). Rather, this phenomenon might be due to the characteristics of the adverbial in question. In fact, in Section 2.3.2, I refer to a distinction between place and manner adverbial phrases (e.g. ‘in the mosquito net’ vs. ‘three times’) according to which the latter are analyzed as exhibiting (more) clausal characteristics in comparison to the former. Let us recall that, in contrast to locative adverbials, manner adverbials carry explicit intransitivity and transitivity agreement marking, and it is even possible to find two sets of each being used with the same adverbial (cf. sentences (35a–b) and (36a–b)); the forms of these agreement markers correspond to reference markers of the PSS and SSS types.

I began Section 5 by pointing out the need to further investigate the domains of application of adverbials from a cross-linguistic perspective. In particular, I have focused on a Panoan-specific means to resolve the potential ambiguity in the scope of certain adverbials, through the use of switch-reference and transitivity agreement. Although the interaction between transitivity agreement and adverbial scope requires further examination, the data presented here have illustrated a typologically unusual strategy that, to my knowledge, had not been previously discussed in the literature.

6. Conclusions

Although by no means exhaustively, the present study has examined core morphological, syntactic and semantic properties of causative constructions in SK, highlighting their various kinds of interaction with transitivity distinctions.

Besides **lexical** causativization (and **periphrastic** with nonimplicative manipulative verbs, see Footnote 18), SK has available different grammatical mechanisms that, in principle, can be seen as interacting in complementary distribution. Among these, **morphological** causativization through the suffixation of *-ma* has been characterized as the more general strategy. When being the only mechanism possible, *-ma* has a very schematic semantics ranging from coercive and inductive, to permissive, enabling, and facilitating meanings. In terms of distribution, I have shown that *-ma* combines with all kinds of verb stems, including

decausativized ones. Furthermore, *-ma* can follow any other causativizer and may occur recursively. A second morphological causativizer, *-n*, is restricted to a closed number of nouns and intransitive roots, and together with *-t*, participates in **double derivation** mechanisms involving roots of body posture that are themselves neutral in terms of valency. When added to nouns, *-n* functions as an instrumental causativizer; with other roots, *-n* can be said to have a physical meaning.

Unlike *-ma* and *-n* which are morphologically dependent and semantically opaque, the causativizer */ak/* is semantically transparent and, in combination with certain roots, exhibits a higher degree of syntactic independence. */ak/* combines with nouns, adjectival-inchoatives, as well as adverbial and postpositional roots, in what could be considered instances of **compound predicates**. The syntactic behavior of */ak/* supports the proposal of a continuum in the formal domain between periphrastic and morphological causativization (Shibatani & Pardeshi, this volume). A separate mechanism, **double auxiliarization**, is found with onomatopoeic roots; an association has been proposed between the distribution and meaning of these predicates and semantic characteristics of the participants involved. Probably the most idiosyncratic strategy is represented by the **suppletive pairs** *jo-/be-* and *ka-/bo-*, for which an association between plurality and transitivity-causation has been proposed. Finally, **ablaut** may cooccur with derivation (footnote 19), while **labile** roots are rather rare.

Aside from labile and suppletive roots, as well as double derivation and auxiliarization, probably most SK causative clauses can be analyzed as nonbasic with respect to their noncausative counterparts in terms of both morphological and semantic complexity. In fact, these causative processes are instances of directed derivation, i.e. of elaborations of the noncausative predicates. Given a basic verb, the addition of *-ma*, *-n* and */ak/* introduces an A argument and triggers the rearrangement of the basic verb's arguments: causers are always marked ergative, causees and affectees are marked absolutive (but see footnote 30). SK is quite permissive in that it allows for multiple absolutive-marked NPs in a single clause. So far, no morphosyntactic mechanism has been found to grammatically distinguish different kinds of objects in a consistent fashion, and therefore the case-marking pattern of (most) causative constructions can be accounted for straightforwardly from the pattern found in (di)transitive noncausative constructions. Causativizers and applicatives may cooccur in the same verb; in the corpus analyzed, applicatives always follow causatives.

Semantic analysis of the SK data corroborates previous linguistic findings such as the distinction between participants that can be seen as ultimate cause versus true instruments; only the former can be encoded as transitive subjects (DeLancey 1984). A topic which has attracted significant interest in the literature is that of the semantic nonequivalency of alternate causative constructions and their use for distinguishing "direct" versus "indirect" causation. Regardless of the nature of the

formal mechanisms involved, analysis of the SK data supports the generalization that alternate causatives refer to different ways of conceptualizing what can be seen as roughly the same ontological situation. When more than one mechanism is possible, it becomes obvious that, like case-markers and lexical items, causatives are symbolic units having an inherent semantics and force-dynamics. As mentioned above, when being the only option available *-ma* has a very schematic semantics. When being an alternative means, *-ma* codes indirect causation and requires a more agentive causee; in these situations, *-ma* yields the meanings of “cause,” “allow,” “facilitate” or “contribute” to a process. On the other hand, *-n* and */ak/* express more direct types of causation involving rather patientive causees. The same mechanisms can also be exploited for disambiguation of polysemous roots, or to obtain different transitive verbs from roots bearing a single meaning (e.g. ‘engender/have’ and ‘deliver’ a child).

An interesting means to indicate the distinction between direct and indirect causation is the detransitivization plus causativization through *-ma* strategy discussed in 4.1.2. In these cases, the inherent force-dynamics of a transitive root (which would otherwise indicate direct causation) can be said to be neutralized by the addition of the detransitivizer. In the predicates in question, derivation gives rise to what is best analyzed as a “middle voice” construction indicating that the patient undergoes the change of state referred to by the root without the involvement of an obvious causer. At the same time, suffixation of *-ma* introduces a nonprototypical agent who allows for or contributes to the process in question, in a situation involving a rather agentive causee. In 4.2 it was also claimed that the distribution of different causativizing mechanisms seems to correlate with whether the patient-of-change can be seen as somehow initiating the event by its own internal force (and thus *-ma* is selected), or whether the change of state of the causee requires an obvious external causer in order to take place (and hence */ak/* is preferred).

In 2.3.3. I have briefly illustrated the coding of causal relations through complex sentences containing same- or switch-reference-marked clauses. In these instances, the specific causal relation between the clauses is left to be inferred from the discourse-pragmatic context. Given that cause situations precede the caused states of affairs, reference-marked clauses coding an event prior to that in the matrix clause are the most commonly found as causal clauses. Alternatively, a cause can also be coded through reference-marked clauses expressing a state of affairs simultaneous to the event in the matrix clause. The addition of the emphatic *-bi* to an otherwise reference-marked cause clause renders a concessive clause; the latter can be considered as the converse of the former. Additionally, SK possesses a postposition with a specialized causal meaning, *kopí*, which may attach to a nominalized clause.

Languages displaying ergative-absolutive case-marking are especially sensitive to the transitivity increase triggered by causativization. Specifically, transitivity al-

ternation processes are ubiquitously expressed in the morphosyntax of SK. In most transitivity-related respects, causative clauses can be said to be modeled on transitive and ditransitive simple clauses. As mentioned above, in terms of case-marking, (most) Vintransitive-*ma* and Vtransitive-*ma* clauses behave just like their transitive and ditransitive counterparts, respectively. Furthermore, the establishment of reference treats causativized clauses as a single unit, and the same occurs in terms of pro-verb selection, intrasentential and intersentential conjunction, and transitivity agreement of dependent clauses. Nevertheless, there is at least one transitivity-related process that seems to treat causative and noncausative clauses differently, namely, intraclausal adverbial transitivity agreement. This feature of SK grammar allows for independent specification of the location of causees and causers, and hence of the predicates in which they take part; when the location of the cause event is specified, the caused event generally falls in that scope. Although further research is needed in this respect, the possibility of certain causative clauses of taking both the intransitive and transitive adverbial forms does not seem to be available for simple noncausative clauses. Through these alternate possibilities the grammar of SK seems to express that at least some causatives differ from other clause types in an essential way. These instances of causativization can be seen as representing a “single complex macro-situation,” where each of the combining components or “micro-situations” (to use Comrie’s 1989: 165 terms) can be modified independently, a distinction which is not typically grammaticalized in languages.

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Notes

1. i.e., “properties characterizable only in terms of the interaction of human beings as part of their environment” (Lakoff 1987:56).
2. A prototypical agent has the positive features: volitional, initiator, controller, responsible, highly individualized and human; a prototypical patient is an affected, non-coreferential with the agent, highly individualized participant. By direct affectation it is implied the exertion of physical energy (by use of hands, body, or some instrument) without any intervening entity (Hopper & Thompson 1980; Givón 1984; Lakoff 1987).
3. For example, from a Lexical-Functional Grammar perspective, causative constructions have been defined as complex predicates arising from the combination of a matrix causative predicate and an embedded base predicate. The matrix predicate takes two arguments, the causer and the caused event; the former affects or acts upon a participant of the latter. There are theory-specific mechanisms or principles that map argument structure to syntax and assign case. Although a complex predicate can be expressed synthetically or analytically, causative constructions are assumed to have the same argument structure. In contrast, predicate composition (i.e., the combination of two argument structures to yield a single complex argument structure) is said to take place in the lexicon in the case of synthetic causatives (i.e. Chicheŵa) but in the syntax in analytic causatives (e.g. Catalan) (Alsina 1992; Alsina 1997).
4. Kozinsky & Polinsky (1993:235) point out that the similarity between causative constructions and other clause types had been observed in Nedjalkov & Sil’nickij (1969); see also Shibatani (1976:29–31).
5. The semantics of particular case-markers, as well as the relationship of case-marking alternations in noncausative and causative constructions are also discussed in Cole (1983).
6. There are circa 25 Panoan languages currently spoken in the neighboring Amazonian regions of Peru, Brazil, and Bolivia. Within the Panoan Family, Shipibo-Konibo has been ‘tentatively’ grouped together with Kapanawa, Marubo, Iskonawa, Wariapano, Remo (+), and Kanamari (+) (Loos 1999:229). In what follows, I will refer to Shipibo-Konibo as SK.

7. By “predominantly agglutinative” I mean the following: words tend to be composed of more than one morpheme, morphemes can generally be identified with one particular meaning, and, in most cases, morpheme boundaries are easily identifiable. However, as mentioned below, the form *-n* is an instance of case syncretism, and as such receives different glosses in this work. On the other hand, synchronically, morpheme boundaries are not clearcut in nominals taking certain *-n* alloforms or verb roots taking the detransitivizer suffix; the variants of the latter cannot be fully accounted for through morphophonological rules. For a recent criticism of the notion of agglutination, see Haspelmath (2000).
8. An analogous statement regarding the identity between the causee and a prototypical patient would not be accurate, given that causees may retain a higher degree of control (Kemmer & Verhagen 1994: 125; Cole 1983; Shibatani & Pardeshi this volume, inter alia).
9. A similar argument could be made to account for the fact that instruments are marked in the same way as A arguments, given that instruments are also effectors and take part in the causal chain (Van Valin & Wilkins 1996). However, this argument does not seem useful to account for the marking of genitives. On the other hand, in SK, agents, forces, abstract entities and some concrete inanimates can occur in A function, but not instruments (see Sections 3.1 and 4.2 below).
10. In the examples that follow, the symbols of the official SK alphabet are used except for the following modifications: x (instead of šh) represents the voiceless retroflex sibilant /ʃ/ and ʼ (instead of h) stands for the voiceless glottal stop. As in the official alphabet, /j/ represents the voiceless glottal fricative /h/, e stands for a high back vowel /m/, and Vn for nasalized vowels. Generally, words bear primary stress on the first syllable unless the second syllable is closed, in which case the latter is stressed. In words deviating from this rule, primary stress is indicated with an acute accent. The source of the illustrative sentences contained in this paper are indicated unless they come from my own work; the analysis of all examples is my responsibility.
11. In some aboriginal Australian languages adverbials agree in case with the arguments they modify (Austin 1988 and 1995; Austin & Bresnan 1996; Goddard 1983: 56–61). However, the languages in question are of the prototypical nonconfigurational kind and thus ergative and absolutive case on nonsubjects, which in these languages are the same as the regular case-markers, can be analyzed as instances of case agreement of modifiers with their head nouns (Givón 1990: 886; see also Valenzuela 1999: 366–368). On the other hand, in Maori, manner adverbial particles agree in voice with the verb (Bauer 1993: 92).
12. Time adverbials do not appear to be sensitive to transitivity (Valenzuela 1999: 358).
13. PFMB stands for Programa de Formación de Maestros Bilingües de la Amazonía Peruana.
14. In (39), *mera-ax* takes same-subject marking given that its subject is included in the subject of the subsequent predicate, *wexa-anan-katit-ai*. The grammaticality of this sentence has been corroborated by other native speakers.
15. For example, while an *-ai*-marked dependent clause is negated by adding *-ma* at the end of the clause, to negate an *-ai*-marked main clause the verbal negative *-yama* is inserted between the stem and the *-ai* morpheme.
16. For a definition of converbs, see Haspelmath (1995).

17. Highest level of Shipibo shamanism.

18. Valenzuela (1997:146–157) distinguishes three subclasses of verbs that can take clausal complements as their direct object. Under one of these subclasses are found the manipulative nonimplicative roots: *keen-* ‘want, wish’; *raan-* ‘send (someone (somewhere) to do something)’; *yono-* ‘order/send someone (to work), ask for something’; *yokat-* ‘ask (for) something’; and *axea-* ‘teach, make someone get used to something’. For reasons of space, I am not dealing with these constructions here; nevertheless, it is worth pointing out that these might be considered as the only clear instances of periphrastic causativization. Cf. periphrastic causatives in Asheninka (David Payne, this volume).

19. Double derivation + ablaut: *yaka-t-* ‘sit (down)’ vs. *yasa-n-* ‘seat’ (example (24)). Decausativization + ablaut: *tesa-* ‘break (tr.)’ vs. *tese-t-* ‘break (intr.)’

20. For a discussion on the “reflexive” marker in Panoan languages, see Loos (1985).

21. For reasons of convenience, I am translating the SK incomplete and completive verb forms into their English present and past equivalents.

22. Interestingly, David Payne (1990:77–78) lists a causative affix of the form /*mV*/ as one of five widespread grammatical forms in South America. In fact, the causative suffix *-mV* is not only found in Panoan and Takanan languages, but also in the Carib languages Apalaí, Hixkaryana (listed as a benefactive), and others; also, the causative suffix *-miti* is found in Aguaruna (Jivaroan). As causative prefix, *mV-* is found in certain Arawakan languages of the Pre-Andine and Southern branches, in the Tupi languages Tupinambá and Munduruku, as well as in Yuracaré, Ona, Pirahã, Nadëb and Yanomama. The form *m-* is found in Tehuelche and Trumai, and *im-* in Mapudungun.

23. The next sentences illustrate independent uses of the *-kin* associative applicative:

- (i) Rama-n-ra Yabi be-kin-ai.
 Rama-ERG-EV Yabi:ABS come.PL/T-ASSOC-INC
 ‘Rama came with Yabi.’
- (i) ... bake-baon-ki ishton rene-kin-a iki
 child-PL:ERG-HSY2 quickly grind-ASSOC-PP2 AUX
 ‘... the children helped (her) grind (it) quickly.’

The fact that the associative applicative *-kin* exhibits exactly the same form as the same-subject marker for simultaneous events requiring a transitive matrix verb (cf. 2.3.2) has been pointed out in Valenzuela (1999) (as well as the identity in form between the benefactive ((16), (40), (76), (77), and (135)) and the same-subject marker *-xon*). Furthermore, “the associative function is compatible with a representation of two events taking place at the same time, or two aspects of a single event; that is, simultaneity” (Valenzuela *ibid.*:368).

24. *jene* ‘flowing water’ is distinguished from *onpax* ‘contained water’, see (118) and (127).

25. DeLancey (1984:208) noted that languages such as English and Hare (Athabaskan) allow forces in A function, given that they are interpreted as direct, ultimate causes. However, since forces are unable of volitional action, both languages have preferred alternative constructions where these are rather coded as obliques (English and Hare examples from DeLancey 1984:208):

POSSIBLE

- (iii) Lightning killed him. (iv) 'idikóné' ye-wéhxá
lightning 3OBJ-killed
'Lightning killed him.'

PREFERRED

- (v) He was killed by lightning. (vi) 'idikóné' k'é lánáwe
lightning died
'He died from/duo to lightning.'

Hence, SK 'drown' is noteworthy not in the flowing water's potential to function as transitive subject, but in that the given structure is the only possible way to code this meaning. This characteristic is related to the lack of a promotional passive.

26. The whirlwind is considered a negative spirit. When the whirlwind reaches somebody, it causes this person to suffer health problems.

27. Plant with special powers.

28. The semantic difference between the transitive forms and the decausativized + *-ma* forms is discussed in 4.1.2.

29. Kemmer & Verhagen (1994) define the affectee as 'the endpoint of the energy (physical or metaphorical) expended in the entire causative event... ' (p. 119).

30. For reasons of space, I am not dealing here with a few verbs/constructions that may allow the causee to be marked with the associative postposition *betan*. One of these instances is illustrated by the sentence below, where the associative marking on the causee seems to be triggered, partially, by the unusually large number of arguments. However, topicality factors may also be involved:

- (vii) Joni-baon-ronki jato-n papa mawat-a-ton kaya
person-PL:ERG-HSY 3p-GEN father die-PP2-GEN soul:ABS
kena-ma-kan-ai meráya betan.
call-CAUS-PL-INC meráya ASSOC
'The people have their late fathers' souls called by the *meráya*'.

31. Also realized just as /a/, especially in Shipibo (as opposed to Konibo).

32. I am not including here the instances where /ak/ follows a concrete noun and has the meaning 'build, manufacture'; e.g. *xobo ak-* 'build (a) house', *nonti ak-* 'build a canoe', *chopa ak-* 'make cloth.'

33. According to Wistrand (1969:157), there are three auxiliaries or pro-verbs in the genetically-related language Kashibo-Kakataibo: the intransitive *?i-* 'be', the transitive *?a-* 'do', and the bitransitive *o-* 'make, do'. The author further adds that *o-* is 'one type of causative.' Interestingly, a similar three-way distinction can be found in the genetically-unrelated Tukanoan languages. For example, in Secoya: *mě-i* 'go up', *mě-a* 'raise', and *mě-o* 'cause to raise'; *dai* 'come', *da* 'bring', *dao* 'make bring' (Johnson & Levinsohn 1990:59). In languages of the Eastern branch, these three morphemes occur as prefixes (Gómez-Imbert, p.c.).

34. Lorient, Lauriault & Day (1993:132) have analyzed *-kain* and *-bain* as composed by the roots *ka-/bo-* ‘go, carry’ plus the locative *-ain*.
35. While *-ma* and *-n* are clearly morphological causativizers, phonologically bound to their stem, the status of */ak/* is not clear in this respect. For example, Lorient, Lauriault & Day (1993:96–97) distinguish between *xobo a-ti* ‘build a house’ and *xobo-a-ti* ‘house build’, thus providing evidence for different stages of grammaticalization of *ak-* ‘make’. For a more exhaustive contrast of the syntactic differences between morphological versus syntactic causativization, see Alsina 1997:221).
36. Although phonologically bound, I am transcribing */a(k)/* as an independent word in the examples that follow, as a way to highlight its peculiar syntactic properties. This principle was also followed in (5), (29), (36a–b), (40), (79), and (92).
37. When trying to elicit sentences such as (98b) and (98d) below, one language consultant explained to me that those sentences were not correct because ‘the *meno* (part) is incomplete’ (Ronon Meni, p.c.).
38. I would like to thank Jae Jung Song for suggesting to me the similarity between the SK and the French constructions.
39. It may be interesting to point out that the relationship between ‘die’ and ‘kill’, expressed via suppletive roots in SK, is coded by morphological means in the genetically-related language Kakataibo: *bama-* ‘die’ vs. *bama-mi-* (die-CAUS) ‘kill’ (Shell 1987:91–92). In a third Panoan language, Marobo, ‘die’ and ‘kill’ are also expressed by distinct roots although different from those found in SK: */vupi/* ‘die’ vs. */yamama/* ‘kill’ (Costa 1998:68, 76). However, in SK the form */yamama/* would clearly be analyzable as causative: *yama-* negative existential + *-ma* causative.
40. The adverbial modification ‘almost’ is coded as a suffix attached to the verb stem, I will return to this in the following section.
41. Even with transitive predicates, the progressive construction containing *itai* takes an absolutive (in the case of ex. (120), *noa*) rather than ergative (*non*) nonemphatic subject.
42. Shipibo houses typically stand on poles.
43. I wish to thank Inkan Soi (Kruger Pacaya Cruz) for sharing his insights on this particular issue.
44. However, (139e) is grammatical with the implausible meaning ‘I bark at the dog.’
45. In fact, in differentiating representational from interpersonal adverbial constituents (equivalent to Quirk et alia’s (1985) adjuncts and disjuncts, respectively) Dik et alia (1990) claim that only the former fall under the same intonation pattern with the core predication (p. 41).
46. According to Olphen (1975), this position flexibility is only possible with “second causatives.”

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Causatives in Asheninka

The case for a sociative source

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This paper describes causatives in Asheninka, a Maipuran Arawakan language spoken largely in Peru (roughly 40–50,000 speakers, in five major regional variations: Pajonal-South Ucayali, Pichis, Ucayali-Yurua, Perené, and Apurucayali Ajiyinka), with a smaller population also in Brazil (roughly 1500 Jurua Asheninka). While morphological causatives in some languages in different parts of the world have been shown to also have a sociative sense, it is commonly assumed that this sociative sense is a later development from a more basic causative sense. Evidence is given in this paper that the more likely development in Maipuran was the other way around – i.e. that Asheninka causatives developed from sociatives.

1. Three coding points of causative constructions

Three types of causative constructions in Asheninka are illustrated in (1):¹

- (1) a. n-oi-pithok-ak-e-ri
1-caus-turn-PERF-MODE-3M
'I turned it (masc.) over/I turned it (masc.) around.'
- b. no-pithok-aka-ak-e-ri
1-turn-CAUS-PERF-MODE-3M
'I made him turn over/turn around.'
- c. no-kant-aka-a-ro i-m-pithok-e
1-be/do-CAUS-REAL/REF-3F 3M-IRR-turn-IRR
'I caused it to be (such that) he would turn over/turn around.'

(1a) involves a lexical or derivational causative prefix, (1b) a productive morphological or inflectional causative suffix, and (1c) a periphrastic causative construction.

Lexical causatives like (1a) involve little or no agentivity by the causee. Periphrastic causatives like (1c) are non-implicative (that is, they do not necessarily involve a successful manipulation), they do not normally involve direct contact between the manipulative agent and the causee, and they do not necessarily involve coteremporality between the effecting action and the resulting manipulation.

The productive inflectional causatives like (1b) are more difficult to provide a consistent semantic characterization for. They generally involve direct contact between the causer and causee, and they are implicative. Most inflectional causatives also have an alternate reading with the sense of “with” (i.e. comitative or sociative).

2. The structure of verbs

By way of providing background for the morphological causative constructions, the structure of Asheninka verbs is sketched in (2):

- (2) SubjAgr Irr VbStem IncorpN IncorpX Dir Asp Mode/Ref ObjAgr1&2 Pl
Rel Mood

SubjAgr = Subject Agreement

Irr = Irrealis

VbStem = Verb Stem

IncorpN = Incorporated Nouns

IncorpX = Incorporated X (everything else, can be up to five affixes in a single verb)

Dir = Directionals

Asp = Aspect

Mode/Ref = Portmanteau morphemes indicating realis vs irrealis mode and reflexive vs non-reflexive actions

ObjAgr1&2 = Up to two Object Agreement affixes

Pl = Plural

Rel = Relativizer

Mood = Mood/Evidentials/Adverbial Subordinators (when, where, if, lest)

The only obligatory verbal category is Mode/Ref. examples of verbs manifesting these categories are in (3):²

- (3) a. o-piryaa-patha-t-an-a-i-ra
3F-dry-ground-&-ARR-RES-REAL-ADVZE
[SubjAgr-VbStem-IncorpN-&-Dir-Asp-Mode/Ref-Mood]
‘where/when the ground had dried again’

- b. a-n-thaanki-t-anty-aa-ri
 1I-IRR-hurry-&-FOR-IRR/REF-REL
 [SubjAgr-Irr-VbStem-&-IncorpX-Mode/Ref-Rel]
 ‘why we will hurry/for which we should hurry’
- c. j-ooso-t-ako-i-t-ak-e-ne-ri
 3M-tie-&-TO-IMPP-&-PERF-MODE-3-3M
 [SubjAgr-VbStem-&-IncorpX-IncorpX-&-Asp-Mode/
 Ref-ObjAgr-ObjAgr]
 ‘he was tied to it/(someone) tied him to it’

3. Lexical/derivational causatives

There are two lexical/derivational causative affixes in Asheninka. One is a suffix occurring on perhaps 30 verbs, shown in (4):

- (4) *-(t)ag* derivational causative suffix

iyotag-/iyo-	teach/know, learn
tsipatag-/tsipa-	pair (tr.), put together/be together with,
be accompanied by	
kempitag-/kempi-	treat like, consider to be the same, do the same
to/be like	
oshiyag-/oshiy-	do like/be like
monkaratag-/monkara-	fulfill, accomplish/equal, measure the same
peyag-/pey-	kill, make disappear, convert/disappear, die,
convert (intr.)	
sarag-/sar-	tear (tr.)/(intr.)
satag-/sa-	break (e.g. egg) (tr.)/(intr.)

With some of the verbs in (4) the *-ag* suffix appears to be a mere transitivizer. Pairs such as “teach/know” and “kill/die” show its causative nature more clearly.

This suffix is not productive. Recent loans in the Yurua dialect of Asheninka such as *tarajaa* “fish with a net,” from Spanish *tarrafa* “net,” cannot be transitivized or causativized by means of *-ag*.

- (5) tarajaa- ‘fish with a net’
 *tarajaatag-

The other lexical/derivational causative is a prefix (or a set of phonologically related prefixes) occurring on around 100 verbs:

(6) *omin-*, *omi-*, *oi-*, *o-*, *ow-* derivational causative prefix

ominthaaw-/thaaw-	scare/be frightened, fear
omishiy-/shiy-	shoo away, run off (tr.)/run, escape
oimag-/mag-	be hospitable to (lit. cause.to.sleep)/sleep
otyag-/tyag-	fell (tr., eg. fell a tree)/fall over
owamaa-/amaa-	float (tr.)/float (intr.), swim

This set of prefixes is also not productive in Asheninka. Similarly to (5), none of these prefixes can occur with the recent loan from Spanish *tarrafa*:

- (7) tarajaa- 'fish with a net'
 *omintarajaa-
 *omitarajaa-
 *oitarajaa-
 *otarajaa-

In some of the other languages in the Pre-Andine family of Arawakan (Machiguenga, Nanti, Nomatsiguenga, Caquinte) the prefix appears to be more productive than in Asheninka (Mary Ruth Wise, p.c.). Nomatsiguenga, for example, has a form:

- (8) y-o-shintsi-t-ë-na
 3M-caus-be.strong-&-REAL-1
 'he strengthened me'

where *shintsi* is a loan from the unrelated Quechua language. This shows that the causative prefix was productive at least a couple of centuries ago.

The *ow-* form of this prefix tends to collocate with vowel initial stems, so would not be expected with a consonant initial stem like *tarajaa*. Aside from this regularity, there is a good deal of non-regular variation between the bare verb roots and the causative stems derived with this set of prefixes:

- (9) osaawant-/saawa- incubate (tr.)/be.hot
 owashiky-/pashiki- shame (tr.)/be.ashamed, be.embarrassed
 oimoshirenk-/kimoshire console/be happy
 otsink-/katsinka- freeze (tr.)/be.cold (having cold)
 owameetha-/kameetha- improve, make.good/be.good

There are also some pairs where the derived causative has both the prefix and the suffix show in (4) and (6):

- (10) oitzipinag-/tzipina- confuse (tr.)/get lost, get off the trail, err
 owarag-/ar- make.fly, blow (e.g. the wind blows a leaf along)/fly
 owawisag-/awis- make pass, save/pass, be saved
 owatsimag-/katsima- anger (tr.), make.angry/be.angry

4. Morphological/inflectional causatives

Asheninka and related Pre-Andine languages also have a morphological/inflectional causative verb suffix illustrated in (11):

- (11) -akag
- a. r-atsipe-t-e
3_M-suffer-&-IRR
'he will suffer' (Yurua Asheninka; showing the same verb as below, but here without the causative suffix)
 - b. r-atsipe-t-akag-ai-t-e-mi
3_M-suffer-&-CAUS-IMPP-&-IRR-2
'you will be made to suffer (impersonal passive)/someone will make you suffer' (Yurua Asheninka)
 - c. r-atsipe-t-aka-ak-e-na
3_M-suffer-&-CAUS-PERF-MODE-1
'he caused me to suffer' (Yurua Asheninka)³
 - d. i-chek-aka-ak-e-na-ro
3_M-cut-CAUS-PERF-MODE-1-3_F
'he made me cut it'
 - e. i-shirink-aka-ak-a-ro
3_M-move.aside-CAUS-PERF-REAL/REF-3_F
'he caused her to move away (e.g. by doing something disagreeable in proximity to her)'
 - f. o-saawa-t-aka-ak-e-ri
3_F-be.hot-&-CAUS-PERF-MODE-3_M
'it caused him/it to be hot (e.g. the sickness caused him to have fever)
 - g. i-saawa-t-aka-ak-e-ri
3_M-be.hot-&-CAUS-PERF-MODE-3_M
'it (e.g. the fire) caused it (e.g. the metal can not too far from the fire) to get hot'
 - h. o-kem-aka-i-ri shiwi-tha mora
3_F-hear/obey-CAUS-REAL-3_M rope-CL horse/mule
'the rope (bridle) causes the horse to obey'
 - i. r-iraantsi-t-aka-i-ro ñaa (Yurua Asheninka)
3_M-blood-&-CAUS-MODE-3_F water
'he caused the water to be blood/he turned the water into blood'

(11f, g and h) show that that the morphological/inflectional causative does not necessarily involve an agentive and volitional causer. (11h) in fact has a more agentive causee than causer. The range of examples above also show this morphologi-

cal causative with all verb types (intransitive (11e), transitive (11d), stative (11f)), and even a causativized noun (11i). Causation on nouns is not so remarkable in Asheninka, considering that any noun can take the range of verb morphology.

The morphological/inflectional causative suffix *-akag* is entirely productive. Any verb can be causativized by means of this suffix, and any newly coined verb may freely occur with it:

- (12) no-tarajaa-t-aka-i-ri
 1-fish.with.net-&-CAUS-REAL-3M
 ‘I caused him to net fish’

The morphological/inflectional causative in Asheninka, in most cases, yields two senses. One is the causative sense illustrated in (11). The other is actually a more immediate interpretation or usual sense for *-akag* with most verbs of physical activity – it involves an enabling, beneficial, cooperative or emphatic action of the causer toward the causee. For example (11c) has the two senses in (13):

- (13) a. ‘He caused me to suffer’ (e.g. by taking me along and us both getting caught in a downpour of rain, in which case we both suffered)
 b. ‘He caused me to suffer’ (e.g. he did something to me intentionally causing me to suffer and he didn’t suffer at all.)

(13a) is a more usual interpretation for this sentence when heard out of context.

Similarly, (12) is most likely to be understood as or said to mean “I took him net-fishing.” But it could also be used to mean “I made him net-fish,” as said by a man referring to his own young son.

And likewise (11d) “he caused me to cut it,” is more likely to mean “he was accompanying me, both of us cutting,” but could also mean “he made me cut it, and he didn’t participate.”

Nearly all verbs of physical activity with the *-akag* causative suffix have these two senses. In natural text the sociative sense is by far the most common. A typical example from natural text is in (14), describing some men bringing an immobile injured man up onto the elevated palm-bark floor of a house (climbing with the sick man on a stretcher up a pole ladder into the house):

- (14) a. i-ky-aaka-apa-ak-e-ri panko-tsi-ki
 3M-enter-CAUS-ARR-PERF-MODE-3M house-UNPOSS-LOC
 ‘They went into into the house with him/took him into the house’
 b. j-atai-t-aka-an-ak-e-ri jenoki
 3M-climb-&-CAUS-DEP-PERF-MODE-3M high
 panko-tsi-ki
 house-UNPOSS-LOC

elements is quite variable. I have witnessed on numerous occasions native speakers of Asheninka employing a verb with two or three suffixes from the IncorpX zone, switching the order of the suffixes around on successive repetitions of the verb.

For the most part, these incorporated elements have a straightforward inflectional function and semantic interpretation. For example incorporated adverbs *-aman* ‘early’ and *-apiint* ‘habitually’ can occur with just about any verb:

- (18) a. *i-chek-aman-ak-e*
 3_M-cut-EARLY-PERF-MODE
 ‘he cut early’
 b. *i-chek-apiintz-i*
 3_M-cut-HAB-REAL
 ‘he habitually cut’

Some of the incorporated adverbs are, of course, moving toward becoming aspectual. Others (like EARLY are unlikely candidates for Aspect). None of the incorporated adverbs yet approach grammaticalized Aspect. There is an altogether distinct position in the verb morphology with highly grammaticalized Aspect (progressive, stative, temporal stative, perfective, resolved perfective).

With the fluidity allowed in IncorpX, suffixes like *-akag* CAUS can show scope:

- (19) a. *pi-n-chek-aka-i-ri*
 2-IRR-cut-CAUS-IRR-3_M
 ‘you will/should make him cut’
 b. *pi-n-chek-apiint-e-ri*
 2-IRR-cut-HAB-IRR-3_M
 ‘you will/should constantly/habitually cut it (masc.)’
 c. *pi-n-chek-aka-apiint-e-ri*
 CAUS-HAB
 ‘you should constantly be making him cut’
 d. *pi-n-chek-apiint-aka-i-ri*
 HAB-CAUS
 ‘you should make him constantly cut’

Another suffix occurring in the IncorpX zone in a special relationship with the causative is *-ant* ANTIPASSIVE:

- (20) a. *i-tow-ak-e-ro* *inchato*
 3_M-fell/cut.down-PERF-MODE-3_F tree
 ‘he felled the tree’
 b. *i-tow-ant-ak-e*
 3_M-fell/cut.down-ANTIP-PERF-MODE
 ‘he felled (some trees, something)’

Similarly to the way that postverbal prepositions in English have colexicalized with certain verbs producing senses that are not readily interpreted (“run up a bill”), these applicatives in Asheninka have colexicalized with certain verbs:

- (25) a. *-ako* with *awis* “pass” to produce “save”
 j-awis-ako-t-ak-e
 3M-pass-IN/ABOUT-&-PERF-MODE
 ‘he was saved (e.g. from drowning, being eaten by a jaguar)’
- b. *-ako* with *kow* “want” to produce “ask”
 i-kow-ako-tz-i-ri osamani
 3M-want-IN/ABOUT-&-REAL-3M long.time
 i-saik-an-ak-e
 3M-live/sit-DEP-PERF-MODE
 ‘he asked him to stay for a long time’
- c. *-ako* with *kam* “die” to produce “die right in the act” AND *-wai* with *ant* “do” to produce “work”
 i-kam-ako-t-ak-e-ro ir-ant-a-wai-re
 3M-die-IN/ABOUT-&-PERF-MODE-3F 3M-do-&-CONT-NOMI
 ‘he died right in the act of working’
- d. *-pitha* with *mag* “sleep” to produce “to fall asleep on someone”
 i-ma-a-pitha-t-ak-e-ri
 3M-sleep-&-FROM-&-PERF-MODE-3M
 ‘he feel asleep on him (e.g. while they were working together or talking)’

In the same way the morphological causative *-akag* shows signs of lexicalizing with certain verbs:

- (26) a. *-akag* CAUS with *iyaa* “go” to produce “continue”
 j-iyaa-t-aka-i-ro
 3M-go-&-CAUS-IRR-3F
 ‘he continued it’
- b. *-akag* CAUS and *-ashi* FOR/TO (e.g. he came for him, came to him) with *ken* “go along” to produce “err/make a mistake”
 i-ken-aka-ashi-t-a
 3M-go.along-CAUS-FOR/TO-&-REAL/REF
 ‘he erred/he made a mistake’
- c. *-akag* CAUS with *nint* “want” to produce “want for x to do, want out of x”

- ji-ma-t-ak-e-ro i-nint-aka-ak-e-ri
 3M-do-&-PERF-REAL-3M 3M-want-CAUS-PERF-MODE-3M
 ir-iri
 3M-father
 ‘he did what his father wanted of him, ...wanted for him to do’
- d. -*akag* CAUS and -*wai* CONT with *kinkitha* ‘tell’ to produce ‘converse with’
- i-kinkitha-wai-t-aka-i-ri
 3M-tell-CONT-&-CAUS-REAL-3M
 ‘he conversed with him’

The verbs in (16) show the same sort of colexicalization.

Asheninka is a split-S marking or active-typology language, where the agreement affixes on the verb mark the split.

- (27) a. no-chek-ak-e-mi
 1-cut-PERF-MODE-2
 ‘I cut you’ (transitive)
- b. pi-chek-ak-e-na
 2-cut-PERF-MODE-1
 ‘I cut you’ (transitive)
- c. no-pok-ak-e
 1-come-PERF-MODE
 ‘I came’ (active intransitive)
- d. pok-ak-e-na
 come-PERF-MODE-1
 ‘I came’ (non-active intransitive, discontinuous topic)
- e. pi-pok-ak-e
 2-come-PERF-MODE
 ‘You came’ (active intransitive)
- f. pok-ak-e-mi
 come-PERF-MODE-2
 ‘You came’ (non-active intransitive, discontinuous topic)
- g. no-saik-ak-e
 1-be/live/sit-PERF-MODE
 ‘I lived’ (active intransitive)
- h. saik-ach-a-na
 be/live/sit-STAT-MODE-1
 ‘I’m here/it’s me’ (non-active intransitive, discontinuous topic)

This active/non-active split interacts with the inflectional causative in some fairly predictable ways. Generally the CAUS suffix is ungrammatical in straightforward non-active constructions ones (in that these are highly intransitive):

- (28) *saik-aka-ach-a-na
 be/live/sit-STAT-MODE-1
 (compare 27h)

It is tempting to say that CAUS is grammatical with active intransitives, in that (29) is a perfectly acceptable verb:

- (29) no-saik-aka-ak-e
 1-be/live/sit-PERF-MODE
 ‘I caused to exist’ (active) (compare 27g)

But transitivity is not a rigid notion in Asheninka. The most straightforward indication of a transitive verb in Asheninka is the presence of both a subject agreement prefix and an object agreement suffix. The object agreement suffix is not obligatory, however, even for the most prototypically transitive verbs. The presence versus absence of an object agreement suffix when there is an overt syntactic object indicates a difference between highly referential, highly topical objects (30a) versus non-referential, non-topical objects (30b):

- (30) a. r-etsiya-t-ako-t-aka-a-ye-t-ak-e-ri eentsi
 3M-be.well-&-OF-&-CAUS-&-DIST-PERF-MODE-3M child
 ‘He healed (caused to be well) the children (the ones being referred to in the prior dialogue)’
 b. osheki mantsiyari r-etsiya-t-ako-t-akaa-ye-t-ak-e
 many sick 3M-be.well-&-OF-&-CAUS-&-DIST-PERF-MODE
 ‘He healed many sick people’

Thus, the inflectional causative *-akag*, can occur in verbs without an object agreement suffix when a non-topical, non-referential object is involved, as in (30b). Similarly, a verb may occur without an object agreement suffix, and even with a stative aspect suffix, if it involves an antipassive (31a) or a reflexive (31b):

- (31) a. kenkitha-t-aka-ant-apiint-ats-i-ri
 tell-&-CAUS-ANTIP-HAB-STAT-REAL-REL
 ‘the one who always addressed (the meeting)’
 b. irii-t-ak-e oshiy-aka-a-went-ach-a-ri
 he-&-PERF-MODE be.like-CAUS-&-APPL-STAT-REAL/REF-REL
 ‘He was the one who made an example/comparison of himself’

The morphological/inflectional causative is beginning to show some phonological deterioration:

- (32) a. saik-akag->saikag- (Pichis Asheninka only, with the verb *saik*
 “live/sit”)
 i-saika-i-mi intaina
 3_M-live/sit.CAUS-REAL-2 far.away
 ‘he took you off far away to live/he caused you to live far away’
- b. *i-saik-aka-i-mi
- c. (The same reduction does not occur in Yurua Asheninka)
 r-isaik-aka-i-mi (*risaikaimi)
 3_M-live/sit-CAUS-REAL-2
 ‘he took you off far away to live/he caused you to live far away’

5. Semantic distinction between the lexical/derivational causative and the morphological/inflectional causative

The semantic distinction between the lexical/derivational causative and the morphological/inflectional causative depends on the class of verb.

For verbs of physical action, the derivational causatives involve direct physical contact ((33a, b), (34a, b)), while inflectional causatives either involve agentive causers exercising coercion or manipulation, or they are sociative (involve complete coterminality and physical contact, as (33c, d), (34c, d)):

- (33) a. n-oi-pithok-ak-e-ri kaminkari
 1-caus-turn-PERF-MODE-3_M cadaver
 ‘I turned the cadaver over’
- b. n-oi-pithok-ak-e-ri no-tomi
 1-caus-turn-PERF-MODE-3_M 1-son
 ‘I turned my son over (e.g. speaking of a baby or an immobile son)’
- c. no-pithok-aka-ak-e-ri no-tomi
 1-turn-CAUS-PERF-MODE-3_M 1-son
 ‘I made my son turn over’
- d. no-pithok-aka-ak-e-ri kaminkari
 1-turn-CAUS-PERF-MODE-3_M cadaver
 ‘I turned over with the cadaver (e.g. we were both shot and the other guy fell on top of me, and after the enemies had ran off, I turned over with the cadaver/caused the cadaver to turn over, while I was holding onto it and turning over myself.)’

Similarly,

- (34) a. n-owary-aak-e-ri kaminkari
 1-CAUS.fall-PERF-MODE-3M carcass
 ‘I threw the carcass down (e.g. a cliff)’
- b. n-owary-aak-e-ri pito
 monkey
 ‘I made the monkey fall (e.g. by shaking the branch he was on)’
- c. no-pary-aaka-ak-e-ri no-tomi
 1-fall-CAUS-PERF-MODE-3M 1-son
 ‘I made my son drop (e.g. he was in a tree, and I told him to drop down to the ground)’ OR ‘I dropped from the tree with my son in my arms’
 (*I caused him to fall (e.g. by shaking the branch))
- d. no-pary-aaka-ak-e-ri kaminkari
 1-fall-CAUS-PERF-MODE-3M cadaver/carcass
 ‘I fell off (e.g. the cliff) with the cadaver/carcass’

For verbs of cognition, perception, speaking, state, change-of-state, and the like, the derivational causatives are agentive, involve direct causation, and are cotemporal ((35a), (36a), (37a), (38a, b)), while inflectional causatives are non-agentive, have indirect causers and are not necessarily cotemporal ((35b, c), (36b), (37b), (38c, d)). Unlike the verbs of physical activity, verbs of this sort with the inflectional causative do not involve a sociative sense. Indeed it is difficult to imagine what kind of sense this would be:

- (35) a. j-iyo-t-a-ak-e-ri
 3M-know-&-CAUS-PERF-MODE-3M
 ‘he (a human) taught him’
- b. j-iyo-t-aka-ak-e-ri
 3M-know-&-CAUS-PERF-MODE-3M
 ‘he (God, shaman) caused him to know’
- c. iyo-t-aka-ak-e-ri
 (3F)-know-&-CAUS-PERF-MODE-3M
 ‘it (tobacco, hallucinogens, a book or letter, what happened yesterday) caused me to know’
- (36) a. j-omin-thaaw-ak-e-ri kashekari
 3M-CAUS-fear-PERF-MODE-3M jaguar
 ‘the jaguar frightened him (e.g. the jaguar was pursuing him or jumped at him)’
- b. i-thaaw-aka-ak-a-ri antari maranke
 3M-fear-CAUS-PERF-MODE/REF-EM big-M snake

‘the big snake (some distance away) frightened him (e.g. it was passive, didn’t strike at him, but snakes are dangerous)’

- (37) a. j-ow-atsima-ak-e-ri
 3M-CAUS-be.angry/fierce-PERF-MODE-3M
 ‘he made him angry, he made the animal mad/fierce (e.g. stepped on its baby, even though not intentional, still agentive, direct, cotemporal)’
- b. i-katsima-t-aka-ak-e-ri
 3M-be.angry/fierce-&-CAUS-PERF-MODE-3M
 ‘he taught him to be fierce (e.g. his timid dog – Asheninkas will put a hot pepper on the dog’s nose to achieve this eventual (non-cotemporal) result)’
- (38) a. n-oi-mairent-ak-e-ri no-tomi
 1-CAUS-be.quiet-PERF-MODE-3M 1-son
 ‘I quieted my son (e.g. by holding my hand over his mouth, or picking him up and distracting him)’
- b. n-oi-mairent-ak-e-ro alarma
 -3F alarm.clock/watch
 ‘I turned the alarm off (as it was sounding)’
- c. no-maire-t-aka-ak-e-ri no-tomi
 1-be.quiet-&-CAUS-PERF-MODE-3M
 ‘I made my son be quiet (with a direct order)’
- d. [?]no-maire-t-aka-ak-e-ro alarma
 ‘I did something that caused the alarm to stop (e.g. having put in a very old battery earlier, that would cause the alarm to stop soon after it began)’

6. Periphrastic causatives

A number of verbs of manipulation (like modality verbs) in Asheninka occur with a following clause that exhibits the beginning stages of grammaticalizing as an object complement:

- (39) a. ishine-t-ak-e-na no-naana-te n-ipok-e Yarina
 (3F)-allow-&-PERF-MODE-1 1-mother-POSS 1-come-IRR Yarina
 ‘My mother allowed me to come to Yarina (to go to school)’
 (Yurua Asheninka)

- b. no-shintsi-tha-tz-i-ri i-m-piy-e
 1-strong-CL:throat-&-real-3M 3M-IRR-return-IRR
 ‘I shouted to/insisted of him that he return’
- c. no-shintsi-wentz-i-ri i-m-piy-e
 1-strong-APPL-REAL-3M 3M-IRR-return-IRR
 ‘I forced him to return’
- d. no-kow-i p-iy-o-t-e-ro
 1-want-REAL 2-know-&-IRR-3F
 ‘I want you to know it’

(See also (1c), (25b), (46) and (47).)

The apparent object complements in (39) and similar constructions involve fully finite verbs in Asheninka.

- (40) a. n-ipok-e ‘I will come’
 b. i-m-piy-e ‘he will return’
 c. p-iy-o-t-e-ro ‘you will/should know it’

The only restriction on these emerging verbal complements is that they be irrealis. Compare (41) to (39d).

- (41) *no-kow-i p-iy-o-tz-i-ro
 2-know-&-REAL-3F

The irrealis requirement implies some other restrictions, since irrealis mode does not occur with the full range of inflectional possibilities for verbs.

- (42) a. no-kow-ak-e i-m-pok-e
 1-want-PERF-MODE 3M-IRR-COME-IRR
 ‘I wanted him to come’ (implies that he didn’t come)
- b. *no-kow-ak-e i-pok-i/ pok-ak-e/ i-pok-ak-e
 3M-COME-REAL/ COME-PERF-MODE/ 3M-COME-PERF-REAL

With the quasi verbal complements required to be irrealis, it follows that they would be non-implicative. And this is, in fact, the primary semantic characteristic of periphrastic causatives in Asheninka – they are non-implicative (i.e. the intended manipulation is not necessarily successful).

The generic periphrastic causative in (1c) involves the verb *kant* ‘be, do,’ used with a reflexive mode/reflexivity suffix.

- (43) no-kant-aka-a-ro i-m-pary-e
 1-be/do-CAUS-REAL/REF-3F 3M-IRR-fall-IRR

‘I caused it to be such that he would fall’ (e.g. I cursed him to fall (as a witch might do), or arranged way ahead of time for a branch I knew he would be climbing on to be nearly broken.)

Compare (43) with the lexical and morphological causatives formed on the same verb in (34).

In natural text, the overwhelming majority of generic periphrastic causatives using the “be/do” verb with a morphological causative, are contexts that involve what is considered to be supernatural causative forces – shamans, witchcraft, God, hexes, or invoking the secret name of someone in a way that exercises power to convert that person into an inferior being or object.

6.1 Diachronic considerations: the case of a sociative source for causatives

The most thorough treatment of causative cognates in the Maipuran Arawakan family is Wise (1990). From this work, it is quite obvious that the Asheninka morphological/inflectional causative *-akag* is cognate with a reciprocal verbal suffix in the broader Maipuran Arawakan family.

The closely related Pre-Andine languages all have the *-akag* causative form, and all have it with a comitative or sociative sense. Even languages like Piro and Apurina (in the next removed branch of Maipuran) have cognates *-kaka* (Piro) and *-ka* (Apurina) which show many of the same functions, and show variability of scope similar to what is illustrated in (19).

Other Maipuran Arawakan languages across South America and previously in the Caribbean, have a reciprocal and/or reflexive verbal suffix very similar to Asheninka *-awakag*, which is related to the causative:

- (44) a. *i-kaim-awaka-ak-a*
 3_M-call-RECIPROCAL-PERF-REAL/REF
 ‘they called to each other’ ASHENINKA
- b. *i-chek-awaka-ak-a*
 3_M-cut-RECIPROCAL-PERF-REAL/REF
 ‘they cut each other’ ASHENINKA

Maipuran Arawakan languages with a similar reciprocal verbal suffix come from most major branches of the family: Apurina *-kaka*, Palicur *-ak/-ek*, Parecis *-kako*, Terena *-kaka*, Waura *-waka* (in verbs) and *-kaka* (in nonverbs), Yavitero *-waha* (where the k–h correspondence is regular), Resigaro *-kakawu*, Garifuna *-gua*. The fact that some languages have the *-wa* element before the *-kaka* material, and others have it following, may be taken as support of the independent status of *-wa* and

-kaka. Wise (1990) considers that *-wa* is the Proto-Maipuran reflexive, and that *-kaka* is the Proto-Maipuran reciprocal.

The most transparent explanation then of the *-akag* causative in Asheninka and Pre-Andine and Piro-Apurina languages is that the original reciprocal sense developed into a broader sociative sense (which it still retains with verbs of physical activity in Pre-Andine languages), and from there to a more recent causative sense. The morpheme *-kaka* may have already had a sociative sense in Proto-Maipuran, witnessed by other languages outside of of Pre-Andine (e.g. Guajiro) having a prepositional cognate glossed as “among.”

This scenario is further confirmed by the comparative data relating to the lexical/derivational suffix *-(t)ag* in Asheninka. As Wise (1990) shows, all Maipuran language have some kind of reflex of a **-ta* causative (most likely with an aspirated [t], as Wise proposes.). A few examples follow.

- (45) a. n-āitya-ta-pai
 1-eat-CAUS-STATIVE
 ‘I am feeding’ WAURA
- b. hitsika-ta
 leave-CAUS
 ‘take out’ YAVITERO
- c. ifo-tu
 fear-CAUS
 ‘frighten’ RESIGARO
- d. naka-ta
 get.up-CAUS
 ‘lift’ WAREKENA

In most languages where it is a clear causative, it appears to primarily apply to intransitive verbs. In other parts of the Maipuran family (as in Asheninka), its present day reflexes are the highly restricted derivational causative as in (4), and the epenthetic [t] referred to in Footnote 2. Wise (1990) documents a transitivizing/verbalizing suffix across Maipuran and relates it to the *-ta* causative. The scenario I propose to account for the epenthetic “t” rampant in the inflectional verb suffixation in Pre-Andine languages (and shown in (3), (8), (11), (12) and most examples throughout this paper) is that the Proto-Maipuran *ta*, became an inflected auxiliary or dummy verb following main verbs. (It still functions in this way in many Maipuran languages.) Then later in Proto-Pre-Andine the verb plus inflected auxiliaries collapsed into a single phonological word, giving rise to the extremely agglutinated verb structure seen in this group of languages. The *ta* syllable now devoid of a syntactic function then became phonological, i.e. epenthetic, serving to break up disallowed vowel clusters by separating a preceding morpheme final

vowel from a following morpheme initial vowel. This makes good phonological sense assuming the prior stage of the language had a simple CV structure disallowing vowel clusters, like many of the daughter languages (including Pre-Andine) still have.

Whether or not this is an accurate reflection of the diachrony, what does seem uncontroversial is that *ta* is the older morphological causative in Maipuran. This is borne out by it having now become unproductive or derivational in the Pre-Andine and Piro-Apurina branches, making room for a new inflectional causative *-kaka*, which, I claim, arose from an earlier sociative.

There appears to be evidence that the other derivational causative in Asheninka, the *omin-/ogi-/ow-/o-* lexical/derivational causative prefix, also arose from a sociative sense. The diachronic evidence is from both internal and external sources.

First the internal evidence: The longest form of this prefix set has much the same phonological content as the verb root in Asheninka *omintha* whose range of meanings is “decide to, desire to, plan to, be anxious to” and “encourage someone to.” (There is also a verb root *ow* “put” which could be the source for some of these causative prefixes. The related Pre-Andine languages have *og* as the causative prefix instead of *ow*, and “put” in these languages is also *og*. But this is somewhat beside the point – it is likely that these causative prefixes are from various sources, some from *omintha* and others from *ow/og*, now eroded into a non-distinct set of derivational prefixes.)

While the use of *omintha* in Asheninka now is primarily as a modality verb:

- (46) j-omintha-t-a-ro ir-aree-t-ai-yaa-mi
 3M-decide-&-REAL/REF-3F 3M-visit-&-RES-IRR/REF-2
 ‘he is anxious to visit you/he’s decided to visit you’

when causativized itself, it can also be used in a lightly causative or manipulative sense, as in:

- (47) j-omintha-t-aka-a-ye-t-ak-a-ri
 3M-decide-&-CAUS-&-DIST-&-PERF-REAL/REF
 iri-ma-ye-t-e-ro
 3M/IRR-do-DIST-&-IRR-3F
 ‘he encouraged them to do it’

The *tha* sequence in this verb *omintha* is an incorporated noun for “throat” and from that, an incorporated classifier for “cord-like objects,” and metaphorically for “word, language,” as in *kenki-tha-* “tell-word” (i.e. converse, preach), *pampi-tha* “follow-word” (i.e. sing, think), *wirakocha-tha-* “foreigner-worded-” (i.e. Spanish-speaker). Separating off the classifier leaves *omin* as content of the verb itself, and the likely source of the derivational causative prefix, whose longest version is also

omin. The other forms of the prefix would then be due to phonological erosion, or epenthetic “w,” between an “o” prefix and following vowel.

The Nomatsiguenga cognate for Asheninka *omin* is *ominiC*, glossed as “take along with, cause to accompany.” Even in Asheninka, the verb *omintha* most typically is used for “deciding or encouraging someone to ACCOMPANY the speaker somewhere.” Assuming the Nomatsiguenga sense is closer to the original meaning of this verb, at least a part of the set of lexical/derivational causative prefixes have their origin in a verb meaning “accompany, take with,” suggesting a sociative source for the causative prefix.

The external evidence, from further afield in Maipuran, likewise corroborates a sociative source for this causative prefix. Wise (1990) cites probable cognates as “comitative,” and glossed “with” or “in the presence of,” in languages as distant as Guajiro (at the far northern extreme), and in the Southern Maipuran branch (at the far southern extreme), where no related causative affix or sense is attested for the morpheme. The most transparent explanation is, again, that the causative sense restricted to Pre-Andine Maipuran languages developed from a sociative adposition “in the presence of, with,” which itself developed from a verb “decide or encourage someone to accompany, go with.”

By way of summary, then, the transparent explanation of the development of causatives in Asheninka and Pre-Andine Maipuran languages suggests a path from an earlier sociative to a causative sense. As the earliest Proto-Maipuran causative, *ta*, became a restricted derivational causative in Pre-Andine on the one hand, and eroded into a mere phonological effect of epenthesis, on the other hand; two new causatives, *omin-* and *-akag* developed independently, both from sociative sources – one from a verb “accompany” cum adposition “with,” and the other from a reciprocal cum sociative.

Notes

1. The transcription used in this paper is the orthography ratified by an October 1999 convention sponsored by the Peruvian Ministry of Education. Except for subphonemic variation, the orthography is straightforward, with the clarification that <th> is aspirated [tʰ], <j> is glottal fricative [h], <sh> is a grooved palatalized fricative, <ts> versus <tz> represents a distinction between an aspirated versus unaspirated affricate respectively, and <ch> vs <ty> represents a distinction between similar aspirated and unaspirated palatalized affricates.
2. In the morpheme-by-morpheme glosses throughout this paper epenthetic “t” and “a” are glossed with the ampersand “&.” The “t” before the suffix *-ag* in some of the forms in (4) is related to this epenthetic “t” productive in the inflectional verb suffixation. See the final section “Diachronic considerations” for more details.

3. The consonant “g” at the end of the causative suffix in (11b), but not in (11c) or in most other examples in this paper, elides in most environments in Asheninka. Generally, in derived environments “g” elides unless there are two vowels before or after it, such as the two vowels of the *-ai* impersonal passive suffix following in (11b).

References

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Guaraní causative constructions

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Introduction

The study of causative constructions has resulted in an extensive body of research and a number of important theoretical postulates. However, a surprisingly large number of languages, in some cases occupying whole geographical areas, has been virtually excluded from the data base. Such is the case of South American indigenous languages, most of which are hardly mentioned in the literature on causatives. This paper has the modest goal of taking one step towards filling this gap by providing a description and analysis of causative constructions in the South American language of Guaraní. Characterizations of semantic and functional differences are based on careful observation of pair-wise contrasts, and on the observation of actual usage in context. The data-base consists of two short plays written in the language, and native-speaker judgements regarding the appropriateness of possible substitutions.

1. Assumptions and terminology

Several basic notions and assumptions, all based on previous studies of linguistic causation, will underlie my discussion of Guaraní causatives. First, following Kemmer and Verhagen (1994: 117–118), I will use the term “causative construction” to refer to a two-predicate structure expressing causation and effect. The two predicates will be called the “causal predicate” and the “effected predicate” respectively. The causal predicate has no more lexical content than a schematic notion of cause (i.e., does not specify the precise nature of the causal event) and is conceptually dependent on the effected predicate in the sense that it necessarily evokes the idea of an effected event.

There are three types of constructions frequently described in the literature on causatives: i) lexical causatives, ii) morphological causatives and iii) syntactic or analytic causatives. As will be discussed later, Shibatani and Pardeshi (this volume) proposes a finer classification which includes intermediate categories among the ones listed here. I will provide a concise definition for each type before I discuss the data on Guaraní causatives. Lexical causatives are verbs that refer to a causative situation but are not formally analyzable into a causal and effected predicate. This type can involve 0-derivation, as in the transitive and intransitive versions of the English verb, *boil*, or it can involve suppletion, i.e., there is no formal similarity between the causative verb and its non-causative counterpart (e.g., English *kill* vs. *die*). In a morphological causative construction, causation is expressed by means of causative affixes attached to basic or derived predicate stems. Analytic or syntactic causatives are constructions in which the causal and the effected events are expressed by two morphologically independent predicates (English *I made him leave*).

A second important assumption adopted in this paper relates to the conceptual understanding of the notion of linguistic causation, i.e., the causative situation denoted by causative constructions. Drawing from a number of previous studies of causative constructions (e.g., Shibatani 1976: 1–2; Givón 1975: 60; Kemmer and Verhagen 1994: 117–119, fn. 2; Song 1996: 16, fn. 4; Langacker 1991: 254), I will assume that a causative situation consists of two events, the causing event and the effected event, that stand in the following relations to each other: i) a temporal sequence such that the causal event precedes the effected event, ii) a semantic entailment relation between the causing event and the effected event in that the truth of the effected event holds whenever that of the causing event holds, iii) the causing event adds a layer of energy to the effected event. Relation (i) is present in different degrees in causative constructions, creating a spectrum of possibilities in relation to event integration. The same is true for (iii), resulting in a range of possibilities with respect to forcefulness.

2. Some relevant aspects of Guaraní grammar

Guaraní exhibits a number of the Western Amazonian features described in Payne (1990: 214) and Derbyshire and Pullum (1986: 19). Among them are: i) polysynthetic characteristics, with suffixes predominating over prefixes, and with postpositions rather than prepositions, and ii) lack of typical voice mechanisms such as agentive passives.

Guaraní has a relatively flexible word order, which is predominantly AVO/SV with some relics of an older AOV order. Word order is one means of indicating

grammatical relations, the other being a system of cross-referential markings on the predicate. These come in two sets, active and inactive, placing the language in the active-stative alignment type. Agents are always cross-referenced as active whether transitive or not, patients of one-argument predicates are also cross-referenced as active if the predicate designates a dynamic event (i.e., involving a change of state). Subjects of inactive, one-argument predicates are cross-referenced as inactive, as are patients of two-argument verbs. Examples (1)–(5) show the basic SV pattern in intransitive clauses, as well as the active and inactive cross-referencing markings. Note that the NPs in both (4) and (5) are marked active despite the fact that one is agentive and the other is not.

Intransitive Inactive clauses

- (1) (Che) nda-che-róga-i
 I NEG-1IN-house-NEG
 ‘I don’t have a home.’
- (2) Che na-che-mboriahu-sé-i
 I NEG-1IN-poor-VOL-NEG
 ‘I don’t want to be poor.’
- (3) (Che) che-rasy-ta hi’ã ché-ve
 I 1IN-sick-FUT it:seems 1IN-LOC/ALL
 ‘I’ll get sick, it seems to me.’

Intransitive Active clauses

- (4) (Che) a-guata-sé
 I 1AC-walk-VOL
 ‘I want to walk.’
- (5) (Che) n-a-mano-se-i
 I NEG-1AC-die-VOL-NEG
 ‘I don’t want to die.’

As can be observed in (1), nouns can function as predicates by taking predicative affixation, and without the addition of any formal derivation. In (1), the noun is cross-referenced as inactive and expresses inalienable possession (Velázquez-Castillo 1996). Nouns can also be used in predicative function without cross-referencing prefixes, as in *Che mbo’e-hara* [*I teach-AG*] ‘I am a teacher’. This construction carries equational meaning.

Example (6) illustrates the basic AVO word order. Note also that lexical NP objects appear unmarked. Example (7) illustrates the use of inactive cross-referencing markings to mark a pronominal object.

Transitive Active Clauses

- (6) (Che) a-joka che-sy kambuchi
 I 1AC-break 1IN-mother jar
 'I broke my mother's jar.'
- (7) Miliko-kuéra che-juka-se
 military:man-PL 1IN-kill-VOL
 'The military men want to kill me.'

Guaraní has very little in the way of straightforward case markings on the noun. There are some oblique postpositions which attach to the last element of the NP, and of these the locative-allative *-pe/-me/-ve* deserves mention because it is used to distinguish grammatically indirect objects from direct objects, as in the ditransitive clause given in (8)

- (8) A-me'e che-memby che-sy-pe
 1AC-give 1IN-offspring 1IN-mother-LOC/ALL
 'I gave my child to my mother.'

As will be shown, the coding of grammatical relations in transitive causative constructions maps neatly into the marking pattern of ditransitive clauses.

3. Guaraní causative construction types

Like most languages, Guaraní exhibits several means of expressing causation, ranging from lexical to periphrastic expressions. However, most causative situations are expressed by either of two morphological causatives: *mbo-/mo-* and *-uka*, the choice between the two depending on the transitivity of the predicate stem. For this reason, the paper focuses primarily on morphological causatives, and only secondarily on other types of causative constructions. I start with lexical causatives, the most compact causative expression, move from there to morphological causatives, which are less compact, and end with analytic causatives, the construction type with the least formal fusion. I show that, parallel to the decreasing formal fusion, there is an accompanying decreasing level of event integration and directness of causation.

3.1 Lexical causatives

By definition, lexical causatives do not contain any formal differentiation between the causal predicate and the effected predicate. In this regard, they are not formally different from regular transitive verbs. The question arises, if there is no formal

difference between these two types of verbs, how can one justify assigning special status to lexical causatives? Some analysts have suggested that an understanding of their semantics can help keep them apart. Kemmer and Verhagen (1994:127) explain that transitive verbs and causative constructions in general are different in that causative constructions refer to a double-event situation: causation per se and a more specific event involving the causee. This, of course, is readily apparent in analytic and, to some extent, in morphological causatives, but not in lexical causatives. Regular transitive verbs, on the other hand, make reference to a single-event situation, where one participant exerts direct force on a second participant. The highly integrated nature of the prototypical transitive situation gives transitive verbs a higher degree of semantic tightness in the view of some analysts. Shibatani (1976:2) suggests a similar semantic difference and offers a test that points to this difference. Causative verbs such as *open* and *melt* imply the realization of an effected event, while regular transitives do not. For this reason, one can say (9) but not (10). Example (10) is unacceptable because it negates the effected event implied in the causative verb *melt*.

(9) John kicked the ice but nothing happened to it.

(10) *John melted the ice but nothing happened to it.

Related to the double-event nature of lexical causatives is their special status vis-à-vis intransitive verbs. While lexical causatives frequently have intransitive counterparts corresponding to their effected events, regular transitive verbs do not. For example, while there is an intransitive English verb *melt*, there is no intransitive counterpart to *kick*. Furthermore, there are often patterned formal differences between causative verbs and their intransitive counterparts. As will be discussed, lexical causatives in Guaraní present at least two formal variation patterns with respect to their intransitive counterparts.

Due perhaps to the high productivity of its morphological causative constructions, Guaraní does not feature a large number of lexical causatives. Most intransitive predicates can become transitive and causative by the addition of the prefix *mbo-*, which, as will be shown in Section 3.2, shows considerable flexibility as to the stem type with which it combines. There are, however, a few transitive verbs which can be considered causative, and are arguably different from regular transitive verbs. When contrasted to non-causative transitive verbs, lexical causatives do not reveal any formal indication of their different status. On the other hand, when contrasted with related intransitive verbs, one can note small but significant variation patterns. Guaraní lexical causatives can be grouped into three small sets, shown in (11), (12) and (13) below. They are listed as intransitive/causative verb pairs, the intransitive version corresponding to the effected event denoted by the

causative verb. In other words, the causative verbs presuppose the realization of the event denoted by the intransitive predicate.

- | <u>Intransitive</u> | <u>Causative</u> |
|--|-----------------------------|
| (11) Intransitive/causative pairs with vowel alternation | |
| jeka ‘to get broken’ | joka ‘to break something’ |
| jera ‘to come untied’ | jora ‘to untie’ |
| jeko ‘to lean against X’ | joko ‘to stop X physically’ |
| (12) Intransitive/causative pairs. Intransitive counterparts marked with <i>je-</i> . ¹ | |
| jupi ‘to climb’ | rupi ‘to lift’ |
| je-pyso ‘to get unfolded’ | pyso ‘to unfold’ |
| ñe-mbichy ‘to get roasted’ | mbichy ‘to roast’ |
| ñe-ñapyti ‘to get tied up’ | ñapyti ‘to tie’ |
| (13) Intransitive/suppletive causative pairs | |
| mano ‘to die’ | juka ‘to kill’ |
| se ‘to get out’ | nohe ‘to take out’ |
| kái ‘to get burned’ | rapy ‘to burn something’ |
| ‘a ‘to fall’ | ty ‘to drop’ |
| reko ‘to have’ | me’e ‘to give’ ² |

The pairs given in (11) present a consistent vowel alternation such that the intransitive is indicated by [e] and the causative is indicated by [o]. It is possible that the vowel alternation is an old means of expressing causation that has been absorbed into the verbal stem. Kemmer and Verhagen (1994: 127) note the commonality of such diachronic development cross-linguistically. As shown in the gloss, the pair *jeko/joko* exhibits an irregular meaning correspondence since the causative counterpart does not mean “to lean something (against something),” as would be expected. There seems to have been a metonymic shift, whereby agentivity is transferred to the support element against which the object is leaned. The meaning “to lean something” is expressed with the morphological causative *mbo-*, as in *mbo-jeko*.

The pairs presented in (12) also exhibit a consistent alternation. The intransitives are marked with the morpheme *je-*. These pairs are different from those in (11) in that the marked member of the pair is the intransitive rather than the causative, i.e., this is perhaps a de-causativization process, as opposed to a causativization process. The prefix *je-* conveys reflexive, passive or impersonal interpretations of active verbs, and is an indicator of what Klimov (1979: 330) calls the “non-centrifugal” version of an active verb: “The centrifugal version denotes an action directed outside the subject, and the non-centrifugal version denotes and

action limited to the subject.” The first example, *jupi* is a reduced form of *je-upi*. Note also that *je-* alternates with *ñe-* to harmonize with nasal stems.

The transitive versions in (13) are suppletive forms. Note the complete lack of morphological relatedness between the two members of each pair. Since there is no discernible morphological element associated with the causative meaning of these verbs, one can say that suppletive causatives exhibit a higher degree of fusion than “inflectional” causatives. The verb *me'e* ‘to give’ is included here because of the causative sense it carries, that of bringing into effect a possessive relation. Its non-causative counterpart *reko* ‘to have’ was shown to express alienable possession (Velázquez-Castillo 1996:75–83). As will be shown in Section 3.2.1, the causative *me'e*, which expresses causation of an alienable possessive relation, contrasts with a morphologically derived causative, which denotes causation of an inalienable relation.

For the most part, the intransitive predicates presented on the left columns are not combinable with the causative *mbo-*. There are some cases in which this is possible, however. The first one belongs to the group given in (11), namely *mbo-jeko* ‘to lean’, which, as explained above, fills the semantic gap of a straight causative meaning left by the metonymic shift undergone by the lexical causative form. The intransitives of group (12) do not admit *mbo-*causativization but a number in group (13) do. The verb ‘*a* ‘to fall’ has a lexicalized morphological causative, *mbo-'a*, ‘to lay eggs’, (literal meaning: ‘to make fall’). This verb is used without an overt causee and can only be understood as having the implicit causee, ‘eggs’. The verb *mano*, can be causativized with *mbo-* only in its reflexive form, *ñe-mo-mano*, with the meaning ‘to pretend to be dead’. The verb *se* can also become a *mbo-*causative: *mo-se* ‘to expel’. These last two verbs are interesting in that they might reveal some subtle semantic differences between lexical and *mbo-*causatives, as will be explained in Section 3.2.

Although formally different, these lexical causatives are semantically unified by a number of common semantic features: i) they all express direct physical causation, ii) there is no perceptible time-lag between the causing and effected events, i.e., the two events are highly integrated. This is compatible with the general hypothesis of linguistic iconicity, which predicts the tendency for correlation between formal fusion and semantic integration. In the specific case of causatives, this tendency is manifested in the exploitation of different levels of formal compactness to express corresponding levels of directness in the causative situation (cf. Haiman 1983, 1985; Kemmer and Verhagen 1994:127). A third characteristic shared by lexical causatives is the fact that the causer is human and agentive in most cases, with the possibility of occasional non-human causers. The causee is often inanimate and offers no resistance to the action of the causer. The occasional animate or human causees are clearly patients with no control over the situation. None of these lexical causatives can be combined with a morphological causative.

3.2 Morphological causatives

As indicated above, Guaraní has two morphological causatives: the causative prefix, *mbo-/mo*⁻³ (CAUS1), which causativizes intransitive predicates, and the suffix *-uka* (CAUS2), which causativizes transitive predicates and is addressed in Section 3.2.2. Both CAUS1 and CAUS2 form a compact, tightly knit unit with the base predicate. This high degree of formal fusion is observed in the fact that both morphemes are contiguous to the base predicate (immediately before in the case of CAUS1 and immediately after in the case of CAUS2) and with no linguistic element interfering between the two. Neither causative morpheme is capable of carrying its own cross-referencing, and tense/aspect markings.

3.2.1 Causativization of intransitive predicates

One interesting fact about CAUS1, *mbo-* is the flexibility it shows with respect to the predicate types to which it attaches. It can combine with any kind of predicate, as long as it is intransitive. It is perhaps because of this versatility that CAUS1 is the most frequent causative construction in Guaraní. As shown in (14b)–(16b) below, the morpheme is prefixed to intransitive inactive predicates (including nouns) designating states, qualities and some concrete objects, as well as to intransitive active predicates designating motion and other complex activities. Note that the personal cross-referencing markings are placed before the CAUS1 prefix. Tense/aspect/modality morphemes are attached to the last element of the complex unit, as seen in (14b) and (16b). The discontinuous negative morpheme, *n...-i*, surrounds the whole unit, as in (14b).

(14a) Che-rembi'u ij-arro-ma. (intransitive nominal predicate)
 1IN-food IN-rice-already
 'My food has rice already.'

(14b) Na-mbo-arro-se-i che-rembi'u
 NEG-IAC-CAUS1-rice-DES-NEG 1IN-food
 'I don't want to add rice to my meal (=the meal I'm cooking).'

(15a) Che-memby i-tavy. (intransitive inactive predicate)
 1IN-offspring 3IN-ignorant
 'My offspring is ignorant.'

(15b) A-mbo-tavy che-memby
 1AC-CAUS1-ignorant 1IN-offspring
 'I lied to my child.'

(16a) Che-memby o-karu-ta. (intransitive active predicate)
 1IN-offspring AC-eat-FUT
 'My child will eat.'

- (16b) A-mo-ngaru-ta che-memby
 1AC-CAUS1-eat-FUT 1IN-offspring
 ‘I will feed my child.’

Grammatically, CAUS1 has a transitivizing effect, i.e., predicates derived with *mbo-* from being 1-ary to being 2-ary.⁴ Like all transitive verbs, CAUS1 predicates take active cross-referencing prefixes, even when the base predicate is inactive. Examples (14b) and (15b) are initially inactive as shown in (14a) and (15a), changing to active predicates when combined with *mbo-*. Example (16b) originates from an active base predicate, as shown in (16a). When combined with *mbo-*, the derived predicate keeps the active marking, although the participant indexed on the derived predicate is different from the A of the base predicate.

The coding of event participants follows the pattern of regular transitive clauses, with the correspondences predicted in Kemmer and Verhagen (1994: 125–128). Like the agent, the causer is cross-referenced with active morphology. This is true regardless of the active status of the base predicate, as shown in (14b)–(16b). Like the direct object, the causee is coded by a bare NP, as seen in (14b)–(16b), or is cross-referenced on the verb with inactive morphology, as in (17):

- (17) Nde-aguélo ... o-guahe che-rendá-pe ... che-**mbo**-tyryry ...
 2IN-grandpa 3AC-arrive 1IN-place-LOC/ALL 1IN-CAUS1-drag
 che-**mo**-inge ka’aguý-pe. (Correa: 19)
 1IN-CAUS-enter forest-LOC/ALL
 ‘Your grandfather came where I was ... dragged me ... took me into the forest ...’

The non-causativized version of the two causative constructions in (17) would be *a-tyryry* [1AC-drag (myself)] and *ai-ke* [1AC-enter] respectively. Note that the active arguments of these underived forms are coded as inactive in the causativized versions of (17), marking their role as causees of the causative construction.

Transitivized predicates derived with *mbo-* have most of the morphological possibilities of a regular transitive predicate. They can take the following morphemes, which are usually reserved for transitive verbs: i) the reflexive/passive morpheme *je-* (18), ii) the nominalizing resultative prefix *tembi-* (19), and the nominalizing agentivizer *-hara* (20):

- (18) Juan o-ñe-**mbo**-guapy ha o-je-joko. (Correa: 14)
 Juan 3AC-REF-CAUS1-seat and 3AC-REF-hold=in=place
 ‘Juan was made to sit down and was held in place.’

- (19) Upe óga-pe-gua temi-mo-ngakuaa
 that house-LOC-from RES-CAUS1-big
 i-kuñatai ramo-ramó-va. (Correa: 11)
 3IN-young=woman just-just-REL
 ‘Someone raised in that household who was just becoming a young woman.’
- (20) Tuja oi-kóva pyri pehengue-icha. Juan
 old=man 3IN-live-REL by=them part=of-COMP Juan
 mo-ngakuaa-hare. (Correa: 11)
 CAUS1-big-AG=former
 ‘An old man who lives with them as part of the family. Someone who raised Juan.’

Clearly, *mbo-* increases the transitivity of its base predicate. However, there are some indications that CAUS1 predicates are not maximally transitive. The first such indication is the preference for the reflexive meaning when combined with *je-* (the passive/reflexive morpheme). In this respect, CAUS1 predicates are different from regular transitives. While regular transitives in combination with *je-* can be interpreted either as reflexives or passives depending on the context, CAUS1 predicates in combination with *je-* show a clear preference for the reflexive meaning and only rarely are interpreted as passives.⁵ The preferred interpretation of the naturally occurring examples (21) and (22) is the reflexive:

- (21) Re-ñe-mbo-tavy-sé niko nde. (Correa: 19)
 2AC-REF-CAUS1-ignorant-DES EMPH you
 ‘It is that you want to pretend to be ignorant (or silly).’
 *‘It is that you want to be made (or kept) ignorant.’
- (22) (Dominga) o-puka ñe-mbo-hory. (Correa: 16)
 Dominga 3AC-laugh REF-CAUS1-cheerful
 ‘Dominga laughed sneeringly (lit: making herself cheerful/*being made cheerful).’

Many of the most commonly reflexivized CAUS1 predicates have the conventionalized interpretation of “pretend to do X” (lit: make oneself do X), i.e., a reflexive, or perhaps middle rather than passive meaning, as shown in (23). In summary, the non-centrifugal version of CAUS1 predicates does not admit an external causer, only an internal one.⁶

- (23) ñe-mbo-guata ‘to pretend to walk in a certain way’/*‘to be made to walk’,
 ñe-mbo-puka ‘to pretend to laugh’/*‘to be made to laugh’,
 ñe-myase ‘to pretend to cry’/*‘to be made to cry’

Another sign that CAUS1 predicates are not maximally transitive is the fact that they cannot nominalize with *je-*, a nominalizer that converts transitive verbs into nouns, as in *je-juka* [NOM-kill] ‘killing’. The CAUS1 predicate, *mbo-kapu* [CAUS1-shoot] ‘shot’, does not nominalize with *je-* (**ñe-mbo-kapu*); instead it nominalizes like an intransitive active verb, with 0-derivation, as in (24):

- (24) Upe jave o-ñe-hendu petei **mbo-kapu**
 that when 3_{AC}-REF-hear one CAUS1-shoot
 mombyry-mi. (Correa: 13)
 far-DIM
 ‘At that moment, a shot was heard a little ways away.’

Finally, there are two CAUS1 predicates which have lexicalized as intransitives: the verb *mbo-’a* [CAUS1-fall] ‘to lay eggs’, mentioned in Section 3.1, and the verb, *mbo-kapu* [CAUS1-explode] ‘to shoot a firearm’. The verb, *mbo-’e* [CAUS1-say] ‘to teach’ can be used either as a transitive or intransitive verb. In the case of the first two examples, the predictability of the object obviates the need for its explicit mention, and this might be at the root of their lexicalization as intransitive verbs.

3.2.1.1 Semantic considerations. The causative morpheme, *mbo-* denotes an intentional intervention on the part of the causer to bring about a change of state on the causee. This intervention is a direct and often a physical one. The nature of the causation expressed by CAUS1 is also implicative but usually not coercive or inductive. In terms of force dynamics (Talmy 1976:61), *mbo-* expresses an infusion of energy over a situation of varying degrees of dynamicity. Depending on the degree of dynamicity of the situation and the degree of active involvement of the causee, there may be a corresponding force assisting the causer’s exertion of energy. In a large number of cases, the change of state is accomplished by overcoming the causee’s natural tendency to remain static. This picture varies depending on whether the base predicate is inactive or active. The causativization of an inactive base predicate such as, *mbo-puku* [CAUS1-long] ‘to make long’ involves an initially static situation and an inanimate, unconscious causee. The event denoted by the causative construction is entirely initiated by the infusion of energy expressed by *mbo-*. The causativization of an active base predicate such as, *mbo-guata* [CAUS1-walk] ‘to make somebody walk’, involves an initially dynamic (changing) situation, and a conscious causee who is willingly involved in the situation and therefore, potentially able to resist. Thus, to accomplish its task, the causer necessitates the cooperation of the causee.

CAUS1 construction differs from lexical causatives in that the latter necessarily involve physical manipulation while CAUS1 does not always. As we will see, whether the causer’s intervention is physical or not has to do with the nature of

conceptualized as “forces” in and of themselves and are attributed enough initiative to be encoded as agents.

To summarize, it seems that CAUS1 shows preference for an agentive causer while allowing for degrees of initiative and deliberateness. There are two clear cases of reduced causer agentivity: a non-human causer and one with an internal causee. As we analyze more examples, other cases of reduced causer agentivity will become evident.

The causee is often human as well, although it is also common to find inanimate causees. Of the 54 CAUS1 examples examined, 34 have human causees, 17 have inanimate causees and 3 have body-part causees. Example (17) has a human causee. Example (25) above involves a body-part causee, and (14b) has an inanimate causee. The higher variability of causee types vis-à-vis causer types has to do with varied base predicates that are combinable with *mbo-*. As will become evident in the course of this section, there is also a range of semantic nuances resulting from the combination of *mbo-* with these different types of base predicates and the concomitant variation in causee’s activeness. Following the order of increasing activity reflected in examples (14b)–(16b), the discussion will proceed from semantic effects in less active predicates to semantic effects on increasingly more active ones.

The ability of CAUS1 to combine with nominals is a morphological trait that is not generally associated with causatives, which are normally seen as the conflation of two events and therefore, of two verbs. Thus, the main focus of the literature on causatives has been on the causativization of verbs. Causativized nouns are perhaps unusual in languages which do not use nouns in predicative function, but the phenomenon is not surprising in languages where nouns can be directly used in this function. As we have seen, nouns in Guaraní can predicate without additional morphology, rendering predicates of two semantic types, equational and possessive (inalienable). Causativization nominals are of two semantic types, illustrated in (26–38).

- (26) Kova-ite rehe ha-’e ndé-ve (o-**mbo**-kurusu
 this-very by 1AC-tell you-DAT 3AC-CAUS1-cross
 i-kuā) (Correa: 17)
 3IN-finger
 ‘By this I tell you (he crossed his fingers).’
- (27) (Ñã Tuni) o-**mo**-mba’e-guasú-vo ... (Correa: 16)
 Ms. Tuni 3AC-CAUS1-thing-big-when
 ‘As ÑãTuni made a big deal out of it.’

kurusu ‘to make something into a cross’ involve physical causation, while *mo-mba’e guasu* ‘to make a big deal out of something’ and *mbu-ekovia* ‘to substitute/replace’ do not involve physical intervention.

Another category represented in the base predicates found with CAUS1 is that of intransitive inactive roots expressing qualities and states. Some examples of this category are: *puku* ‘long’, *tavy* ‘ignorant’, *rasy* ‘sick’. As in the case of nominals, causativized inactive predicates express direct, but not necessarily physical causation. Example (29) below, in which Dominga heats the water for the morning herbal drink, involves direct physical intervention. The sentence would be unacceptable if Dominga left the water in the sun to get warm on its own because this situation would not involve Dominga in a direct way. On the other hand, the predicate, *mbo-tavy* [CAUS1-ignorant] ‘to lie’, does not involve physical manipulation of any kind, although no intermediary is understood to stand between causer and causee.

- (29) Oi-ke Dominga. O-mby-aku-ta-hína y
 3_{AC}-enter Dominga 3_{AC}-CAUS1-hot-FUT-PRG water
 ka’ay-rã. (Correa: 12)
 ka’ay-FUT
 ‘Dominga came in..she was getting ready to heat water for ka’ay(=herbal hot drink).’

Related to the question of directness is the issue of event integration. Note in this regard the temporal and spatial contiguity between the causal and effected event. Although one can readily evoke the causal and effected events as two distinct situations, they are experientially and conceptually tightly connected. Leaving the water to warm up in the sun would involve more spatial and temporal separation than the construction would allow.

As in the case of causativized nominals, the causee can be inanimate or human and is portrayed as a passive recipient of the causer’s action. This is obvious in the case of inanimate causees, such as the water in (29). The causee of *mbo-tavy* ‘to lie’, although human is equally passive and uninvolved in the act of deception.

The picture changes somewhat when active predicates are causativized with CAUS1. Since active predicates involve changing situations by definition, their single argument frequently refers to actively involved human participants. When these active participants function as causees of the CAUS1 construction, their initial agentivity is diminished a great deal but often not totally eliminated. Although an asymmetry in degree of control between causer and causee is necessary for causation to eventuate, an active causee is normally seen as a cooperating participant, albeit not always willing. In these cases we have what Shibatani and Pardeshi (this

volume) terms sociative causation. Example (30), repeated from (18), is a case of assistive sociative:

- (30) Juan o-ñe-mbo-guapy ha o-je-joko. (Correa: 14)
 Juan 3AC-REF-CAUS1-seat and 3AC-REF-hold=in=place
 ‘Juan was made to sit down and was held in place.’

Juan had been shot minutes before the situation described in (30) occurred. Clearly, the causers (left unmentioned) helped Juan sit down because he could not do it by himself, but he was conscious and willingly cooperated in the effort. Similarly, the causative verb *mo-ngaru* [CAUS1-eat] evokes images of animals, children or incapacitated adults who need help to feed themselves. These cases of semi-agentive causees would fall within the category of assistive causation. Equally active causees are found in cases of joint-action sociative, which have to do with cases in which causer and causee perform the same action in a parallel fashion. The causative verb *mbo-dipara* [CAUS1-run] can be used to refer to a situation in which the causer runs along with the causee. The causative predicate *mbo-guata* [CAUS1-walk] can be used with either assistive or joint-action sociative meaning. The causative expression *mo-se* [CAUS1-get out] ‘to expel’ evokes a situation in which the causee is not positively affected by the situation. Nevertheless the act of “expelling” cannot happen without the causee performing the act of leaving.

As mentioned before, even in cases of active causees, there must be an asymmetric relation between causer and causee regarding control. While the causer is often, though not always, in control and agentive, the causee frequently is not. This asymmetry in degree of control should be obvious when causation flows from human to non-human participants. Human causees are generally portrayed as unable to avoid the change of state expressed in CAUS1 predicates; this is true regardless of the animacy of the causer. When human causees are affected by human causers, the asymmetrical relation between the two is the product of a difference in power, either physical or social. Human causees are often children manipulated by adults, unconscious or physically disadvantaged adults or otherwise lacking control. An extreme example of this can be seen in (17), repeated here as (31), where the causee is literally unconscious and is dragged out of the forest, fed and taken care of by the causer:

- (31) Nde-aguélo ... o-guahe che-rendá-pe ... che-mbo-tyryry ...
 2IN-grandpa 3AC-arrive 1IN-place-LOC 1IN-CAUS1-drag
 che-mo-inge ka’aguý-pe. (Correa: 19)
 1IN-CAUS-enter forest-LOC/ALL
 ‘Your grandfather came where I was ... dragged me ... took me into the forest ...’

The causee of the CAUS1 predicate *mo-se* [CAUS1-leave] ‘to expel’ is necessarily socially disadvantaged vis-à-vis the causer, since the latter has to be the owner of a facility/property in question, or a person in a position of authority to perform the act of expelling.

As in all cases of CAUS1 predicates discussed so far, causation involving active predicates refers to direct, though not necessarily physical causation. The act of expelling may, but frequently does not, involve physical intervention, but the predicate does require that there be no intermediary between causer and causee. Similarly, the CAUS1 predicate *mo-ngaru* [CAUS1-eat] would be unacceptable for a situation in which the causer does not feed the causee or prepares food for the causee him/herself and, say, causes the causee to eat by providing the money to purchase the food. The predicate, *mo-nguera* [CAUS1-get well] ‘to cure’ cannot be used to refer to a causer affecting the health of the causee by taking the latter to the doctor. The causer himself has to prepare the medicine or take care of the causee. Note, however, that in cases such as these, with more active causees, the construction tolerates longer lapses of time and space between the causal and effected events; i.e., there can be a lower degree of event integration.

The fact that CAUS1 does not profile an agent with strong intentionality and denotes a causee incapable of or unwilling to resist the energy infusion effected by the causer makes this construction the ideal choice for conveying victimization or helplessness, but not strong enough for the direct assignment of blame. Example (28) above, in which Juan tells Dominga that she has replaced him because he limped, is a good illustration of this effect. Juan, the causee, portrays himself as the victim of Dominga’s alleged decision to leave him for another man. More than an accusation, the statement is designed to lay a guilt trip on Dominga. As discussed in Section 3.2.2.1, CAUS2 has a much stronger accusatory effect.

3.2.2 Causativization of transitive predicates

The second causative morpheme, *-uka* (CAUS2), is in complementary distribution with *mbo-* in that it combines with transitive verbal predicates, including those derived with CAUS1 *mbo-*, but never with intransitive predicates. Not surprisingly, CAUS2 is considerably less frequent than CAUS1. Only 16% of all morphological causatives found in the texts examined were CAUS2. Sentences (32b) and (33b) are constructed examples which illustrate two transitive predicates in combination with *-uka*. (32b) shows a regular transitive predicate causativized with *-uka* and (33b) shows an intransitive predicate that has been transitivized with *mbo-* and causativized with *-uka*. Since CAUS1 is a prefix and CAUS2 a suffix, when both causative affixes are present, they surround the main predicate. Note also in (32b) that the discontinuous negative morpheme surrounds the whole complex unit, pointing to a high degree of morphological compactness.

- (32a) (Nde) *nde-re-hechá-i che-rái.*
 You NEG-2AC-see-NEG 1IN-tooth
 ‘You didn’t see my teeth.’
- (32b) *Nd-a-hecha-uka-i nde-ve che-rái.* (transitive verbal predicate)
 NEG-1AC-see-CAUS2-NEG you-to 1IN-teeth
 ‘I didn’t show (lit.:make see) you my teeth (=I didn’t smile at you).’
- (33a) (Nde) *re-mo-poti che-róga.*
 You 2AC-CAUS1-clean 1IN-house
 ‘You cleaned my house.’
- (33b) *A-mo-poti-uka-se nde-ve che-róga.* (derived transitive verb)
 1AC-CAUS1-clean-CAUS2-DES you-to 1IN-house
 ‘I want to make you clean my house.’

CAUS2 extends the action chain, which grammatically amounts to an increase in the number of arguments. Predicates combined with *-uka* start out as active 2-ary verbal predicates and end up as active 3-ary verbal predicates. As shown in (32b) and (33b), CAUS2 predicates have three arguments: an Agent, cross-referenced with active prefixes, a causee, corresponding to the Agent in the a-examples and marked like an indirect object, and the affectee, corresponding to the direct object in the a-examples and marked like a direct object. This marking pattern conforms to the predictions made in Kemmer and Verhagen (1994:126), namely that causativized transitive verbs follow the pattern of di-transitive clauses. Like direct objects, affectees are coded with bare NPs, as in (32b) and (33b), or with inactive morphology on the predicate, as in (34).

- (34) *Nda-ha’ei-chene che-ryke’y, pe-icha-ite-peve*
 NEG-to=be-SUBJ=NEG 1IN-older=brother that-like-very-until
che-nupa-uká-va. (Molinier: 77)
 1IN-beat-CAUS2-REL
 ‘You must not be my brother to have me beaten up to this extent.’

Like regular transitive verbs, CAUS2 predicates can take the morpheme *je-* with either reflexive or passive interpretation. Example (35) has a reflexive interpretation, but it can easily be read as passive (especially if one eliminates the dative causee *che-ve*), in which case the translation would be ‘you made yourself loved (by me)’

- (35) *Upéi re-ju nde re-je-hayhu-ka ché-ve ha*
 Then 2AC-come you 2AC-REF-love-CAUS2 1IN-DAT and
nda-i-katu-vé-i a-ma’e hese. (Correa: 18)
 NEG-1IN-be=possible-more-NEG 1AC-look at=him

‘Then you came and caused me to love you (lit.=yourself) and I could not look at him any more (=I disliked him so).’

As is common with direct objects in Guaraní, the affectee is often omitted when topical and understood from context. This is illustrated in (36), which occurs in a conversation about the shooting injury of one of the main characters in the play.

- (36) Che ai-kuaa porã avá-pa o-japo-**uka** (Correa: 14)
 I 1AC-know well person-INT 3AC-do-CAUS2
 ‘I know well who had it done.’

Note that the causee is omitted here as well. This is often the case when causees are non-topical or peripheral in the discourse. In this case, the causee’s identity is unknown and to a large extent irrelevant, since the focus is on the causer, who bears ultimate responsibility for the action. In (37), the identity of the causee is not at issue. What is important is the fact that the text has been translated and the fact that the editorial house NAPA is to be credited for this. The sentence continues with an explanation of why it was necessary to translate the material to Guaraní.

- (37) Ko’ã mba’e ... NAPA o-**mbo**-hasa-**uka**-pa
 these thing NAPA 3AC-CAUS1-pass-CAUS2-COMPL
 guaraní-me. (Correa: 12)
 guaraní-LOC/ALL
 ‘These things NAPA had (someone) translate completely to Guaraní.’

Dative-marked NPs are not necessarily interpreted as causees when appearing with CAUS2 predicates. In the following constructed sentence, for example, the indirect object cannot be interpreted as the causee but as the recipient of a verbal message:

- (38) Che-mena he’i-**uka** ché-ve o-ú-ta-ma-ha.
 1IN-husband say-CAUS2 1IN-DAT 3AC-come-FUT-PERF-that
 ‘My husband sent me word (lit.: made (X) tell me) that he will come back soon.’
 ??‘My husband made me say that he will come back soon.’

Although, strictly speaking, (38) could receive the interpretation marked (??) under special circumstances, the context normally disfavors such interpretation. The indirect object is interpreted as the recipient rather than the causee because the identification of an addressee is more central to the meaning of the verb of communication, *he’i*, than that of an intermediary between the two main parties; and because the discourse focuses on the message, not on the messenger. This interpretation pattern is also common with ditransitive verbs such as *me’e* ‘to give’, which strongly evokes the presence of a recipient. In the following constructed exam-

ple, the indirect object can be interpreted, either as the causee or as the recipient, depending on the context:

- (39) Che-jaryi o-me'e-**uka** chéve ij-ao-kue.
 1IN-grandma 3AC-give-CAUS2 1IN-DAT 3IN-clothes-PAST
 'My grandma had (someone) give me her clothes', or
 'My grandma made me give (away) her clothes.'

If a recipient needs to be mentioned in the second interpretation, another dative-marked NP can be added after the affectee. In this case, the NP immediately following the verb is interpreted as the causee and the second indirect object is interpreted as the recipient. There is always the logical possibility that the indirect object will be interpreted as an interested party rather than as the causee. This is, of course, limited by the pragmatic plausibility of such an interpretation. For instance, (32b) and (33b) do not accommodate very well an interpretation in which the indirect object is not the causee. But a slight modification of (33b) renders a benefactive interpretation of the indirect object quite felicitous, as shown in (40):

- (40) A-**mo**-poti-**uka**-se nde-ve nde-róga.
 1AC-CAUS1-clean-CAUS2-DES you-to 2IN-house
 'I want to make you clean your house', or
 'I want to make (somebody) clean your house for you.'

The proliferation of participants resulting from the extension of the action chain by CAUS2 runs against a shortage of linguistic coding devices as it were. The problem is solved on the speaker's end by either omitting peripheral information or including different information with the same marking, and by pragmatic inference on the part of the listener. When the causee is omitted, there could in principle be a long chain of intermediaries. Example (38), for example, in which the causer sends a message to his wife, could easily involve more than one intermediary interventions between the causer and the causee. The same can be said of example (40) above. It is possible that the causer has asked somebody to look for somebody else to do the work of cleaning the house. Section 3.2.2.1, which examines the semantics of CAUS2, discusses the indirect nature of the causation expressed by *-uka*.

3.2.2.1 Semantic considerations. One of the main semantic differences between the two morphological causatives is the fact that *mbo-* denotes direct causation while *-uka* frequently does not. In fact, as suggested above, there is always the logically possible interpretation of indirect causation. By indirect causation I mean the existence of a fourth participant intervening between the causer and the causee. The fact that this morpheme is specifically designed to causativize transitive predicates makes it naturally suitable to express indirect causation. This is because there

is no direct contact between the causer and the affectee, the only direct contact possible being that which exists between the causer and the causee. In a transitive causative then, the causee can already be considered an intermediary force.

Concomitant with the indirect nature of the interaction between causer and causee is the increased possibility of spatial and temporal separation between the causal and the effected events. As will become evident in the examples included in the discussion, a considerable lapse of time can separate the two events, and a number of intermediaries can intervene between causer and causee, increasing the distance between the events and the participants involved.

As for force dynamics, CAUS2 predicates imply more forcefulness than CAUS1 predicates. The implication of coercion is not uncommon with this construction, as shown in (41).

- (41) *Tai-kuaa-uka ndé-ve.* (Correa: 15)
 DES=1AC-know-CAUS2 you-DAT
 ‘Let me make you know.’ (=‘I’ll teach you.’)

This utterance is said by an old man to a young woman who has allegedly left his stepson for another man and is clearly a threat. The context is one in which she tries to talk to, and assist the wounded young man, who angrily refuses to respond to her questions. The old man utters these words as he gets very close and leans towards her, implying the possible use of physical aggression that will “teach her a lesson.”

Consider now the difference in interpretation between (42) and (43), which involve semantically similar base-predicates differing only in transitivity. While the CAUS1 predicate in (42) has an assistive interpretation, the CAUS2 example in (43) has the clear implication that the causee will be forced to eat.

- (42) *Ro-mo-ngarú-ta.*
 1AC/2IN-CAUS1-eat-FUT
 ‘I will feed you.’
- (43) *Ha-’u-ka-ta nde-ve ne-rembi-’u.*
 1AC-eat-CAUS2-FUT you-DAT 2IN-RES-eat
 ‘I will make you eat your food.’

In fact, the causative version of the transitive “eat,” *’u-ka* [CAUS2-eat] is often used metaphorically as threats of physical violence with affectee objects such as “slap” and “whack.”

The increased forcefulness of CAUS2 vis-à-vis CAUS1 has a lot to do with the nature of the causer and the causee. The causer of CAUS2 is always human and acts deliberately with the intention of bringing about the change of state expressed in the predicate. CAUS2 disallows inanimate forces as causers, which, as we know, are

not ruled out in CAUS1. Thus, (44) would be unacceptable, even though the base predicate meets the grammatical requirement of transitivity:

- (44) *Mba'asy ha vy'a-'y o-vende-**uka** chupe hóga.
 illness and happy-NEG 3_{AC}-sell-CAUS2 to=him 3_{IN}=house
 'Illness and unhappiness made him sell his house.'

The causee is also always human and, in contrast to causees of CAUS1 predicates, always active, conscious, and deliberate. This makes sense when one considers that most of the base-predicates are transitive and involve highly agentive subjects. The increased active nature of CAUS2 causees in relation to CAUS1 causees contributes to create the sense of greater forcefulness alluded to earlier. The higher agentivity of CAUS2 causees renders them inherently better able to resist the action of the causer, thus creating a dynamic opposition that increases the need for forcefulness on the part of the causer. This augmented force on the part of the causer is not necessarily of a physical nature. It can involve psychological manipulation, including persuasion. An example of psychological manipulation was given in (35). Zoilo, one of the male characters in the play accuses Dominga, a young woman, of bringing about his infatuation with her. The young man clearly lays responsibility on the woman for his emotional attachment to her, which is portrayed as somehow provoked by her. This is a strategic move on his part in his on-going attempt to reverse her resistance to his amorous advances.

In contrast to CAUS1 predicates, which emphasize the helplessness of the causee rather than the responsibility of the causer, CAUS2 is often used to assign responsibility and accuse. Example (36) has a similar semantic effect. Dominga says after the shooting injury of Juan that she knows who had it done, clearly assigning responsibility to an unmentioned causer. I will close this section with an extended illustration of the type of accusatory/defensive exchange in which CAUS2 predicates are typically used. Fragment (45) is at the beginning of a short play in which Vyro, accuses his brother Peru of bringing about the severe beating he was just subjected to:

- (45) VYRO: Che ndo-roi-kuaa-i ... Nda-ha'ei-chene
 I NEG-1_{AC}/2_{IN}-know-NEG NEG-to=be-SUBJ=NEG
 che-ryke'y, pe-icha-ite-peve che-nupa-uká-va.
 1_{IN}-older=brother that-like-very-until 1_{IN}-beat-CAUS2-REL
 'I don't know you ... You must not be my brother to have me
 beaten up to this extent.'
- PERU: Nde niko re-ñe'e che a-japo-rō-gua-icha nde-rehe.
 You EMPH 2_{AC}-talk I 1_{AC}-do-COND-from-COMP you-at
 'But you are talking as if I have done this to you.'

VYRO: Nde re-japo-uka che-rehe. (Molinier: 77)
 You 2_{AC}-do-CAUS2 I-at
 ‘You have had this done to me’

Vyro clearly blames his brother for the beating he received. In fact he is so angry with his brother that he questions their kinship. This is exactly Peru’s interpretation, as evidenced by his defensive remark to the effect that his brother talked to him as if he in fact had performed the beating. Vyro repeats the accusation in the last line and since Peru remained confused, he explained that he was beaten because he tried to play the same trick that Peru had played previously on the people who have beaten him. Note the indirect nature of Peru’s involvement in the event he gets blamed for. He, of course, needs not accept the blame, and can argue that he cannot be considered responsible since he didn’t even know about the beating. Note also the lack of temporal and spatial contiguity between cause and effect, a clear contrast with CAUS1, which requires a higher degree of event integration. As will be discussed in the next section, there is even less event integration in the case of syntactic causatives.

3.2.3 *Morphological causatives and noun incorporation/possessor ascension*

An additional note of interest regarding issues of transitivity and valency for CAUS1 and CAUS2 has to do with their interaction with noun incorporation (NI) and possessor ascension. As explained in Velázquez-Castillo (1996), Guaraní has two types of NI: incorporation of non-body-part objects and body-part term incorporation, the latter co-occurring with possessor ascension. Regarding the first type of NI, I argued that object incorporation is a de-transitivizing process. I pointed to their combinability with *mbo-* as an indication that the complex units derived through object incorporation are intransitive. It was also shown that CAUS2 causativization is disallowed, indicating that the incorporated noun did not have a real object status. A list of examples of NI predicates in combination with both types of causatives is shown in (46) and (47):

NI-derived predicates	CAUS1	CAUS2
(46) ka’u kaña-ingest ‘to drink kaña’	mo-nga’u	*ka’u-ka
(47) y-‘u water-ingest ‘to drink water’	mbo-y-‘u	*y-‘u-ka

In the case of body-part term incorporation, there are two general cases to be considered, object incorporation and intransitive subject incorporation. In the first

case, I showed that, although the incorporated body-part term loses its object status, an external possessor functions as the clausal object. Being transitive, the resulting predicate does not admit *mbo*-causativization but combines well with CAUS2 *-uka*, as can be observed in examples (48) and (49). As expected, given the semantic effects considered above, causativization with CAUS2 creates an implication of forceful causation, with an unwilling affectee.

(48) **mbo-po-pete* *po-pete-uka*
 [CAUS1-hand-slap] [hand-slap-CAUS2]

(49) **mbo-hova-joka* *hova-joka-uka*
 [CAUS1-face-break] [face-break-CAUS2]

When a predicate resulting from an incorporated body-part term object reflexivizes, transitivity decreases and *mbo*-causativization is possible, as seen in (50) below. The resulting predicate conveys an assistive interpretation, again consistent with the semantic characterization of CAUS1 given in Section 3.2.1.

(50) ...*hetá-mi* *i-sy* *o-guero-kyhyjé-gui* *ni*
 many-HAB 3IN-mother 3AC-OBJ-fear-from not=even
 no-*mbo-j-ova-héi-ri* *i-mitā-me.* (Correa: 17)
 NEG-CAUS1-REF-face-wash-NEG 3IN-child-ALL/LOC
 ‘Because his mother feared for him so much, she didn’t even wash his
 child’s face.’ (lit.: She didn’t even make his child wash his face)
 Cf. Non-causative predicate: *o-jova-héi* 3AC-REF-face-wash ‘he washed
 his face’

When the incorporated body-part is an intransitive subject, the resulting predicate remains intransitive, which makes it amenable to *mbo*-causativization, as shown in (51).

(51) ...*ni* *Lóma Valentina*
 not=even Lomas Valentinas
 na-*che-mo-pyta-ryry-i-vaekue.* (Correa: 12)
 NEG-1IN-CAUS1-heel-shake NEG-PAST
 ‘Not even Lomas Valentinas (a battle) made my heels shake.’
 (lit.: ‘made me shake my heels’)

Note that the non-causative predicate is: *che-pyta-ryryi* 1IN-heel-heel-shake ‘I heel-shaked’, where the intransitive subject, *pyta* is incorporated into the verb *ryryi*, and the possessor *che*, functions as the clausal subject.

3.3 Syntactic causatives

Guaraní does not have many periphrastic causative structures. I will briefly describe two constructions for the sake of providing a complete picture of the range of causative constructions available in the language. The first one, illustrated in (52), involves the verb *heja* ‘to leave (something or someone)’. The second construction, shown in (53), involves the verb, ‘e ‘to tell’ in the causal clause and the purposive particle, *haguã* in the effected clause.

- (52) A-heja o-ho
 1_{AC}-leave 3_{AC}-go
 ‘I let him/her go.’
- (53) Ha-’e chupe o-ho haguã
 1_{AC}-tell to=him 3_{AC}-go PURP
 ‘I told him to go.’

In both constructions, the two juxtaposed clauses are more or less independent of each other. Each verb features its own personal cross-referencing prefixes, suggesting that the two sentences are related by coordination, not by subordination. On the other hand, the two predicates cannot carry their own tense/aspect markings or be independently negated. A single marking of negation or tense on the causal verb has its scope over the whole complex sentence, signaling some level of dependence between the two clauses. The negative version of (52), for instance, would be, *nda-heja-i o-ho* [NEG-leave-NEG 3_{AC}-go] ‘I didn’t let him/her go’.

The type of causation expressed in (52) is implicative in the sense that the event encoded by the effected predicate is factual. In this sense, this construction fits the characterization of causatives proper presented in the introduction. An important aspect of the semantics of this construction is its interpretation as permissive, i.e., the causer does not actively initiate the chain of events that brings about the effected event. Rather, the causer merely allows or lets something happen by remaining inactive.

Example (53) is inductive in nature and non-implicative in the sense that the event expressed by the effected predicate is not yet realized at the time of the utterance. Its non-implicative meaning places it in the periphery of the causative category as defined here. In addition, note that the “causative” verb translated as, ‘to tell’ specifies the type of causing action, indicating that it is very early in the grammaticalization process. Its peripherality notwithstanding, this construction type has been recently proposed as a putative important piece in the linguistic evolution of causatives (Song 1996:91–106).

The mere juxtaposition of the two clauses iconically registers the temporal sequence of the events denoted by the clause. While the two morphological causatives

have the potential to express degrees of separation between the causal and effected events, syntactic causatives are by nature unintegrated. The two events must be non-simultaneous and therefore not integrated. The degree of causer intervention is reduced considerably in the case the permissive causative and is minimal in the case of the inductive causative.

4. Concluding remarks

This paper presents a fairly complete picture of the range of causative constructions available in Guaraní, and provides a thorough description and analysis of the semantic and functional differences among these constructions. The analysis is based on a proposed cline in directness and event integration expressed by the different causative constructions, such that lexical causatives express the most direct and integrated type of causation, CAUS1 the next most direct/integrated, followed by CAUS2, which is followed by the syntactic causatives, expressing the least direct and integrated causation type. Figure 1 summarizes the overall conceptualization underlying the analysis.

The degree of activeness of the causee was found to be one of the elements most consistently correlated with levels of directness and event integration. The more active the causee, the more indirect the causative situation tends to be. Causee activeness was also found to play a role in the degree of forcefulness of the causation expressed. The more actively involved a causee is, the higher the likelihood of resistance, and the stronger the need for increased forcefulness in the intervention of the causer.

Although the morphological compactness cline roughly mirrors the semantic cline presented in Figure 1, the morphological continuum is not a faithful reflection of all the nuances presented in the semantic cline. For instance, there is not a discernable difference in morphological tightness between the two morphological causatives, even though they clearly differ in terms of degrees of directness/event integration expressed. Additionally, this study found different levels of directness/event integration in the situation types covered by CAUS1, yet these differences do not translate into varying degrees of morphological compactness.⁷

A large part of the paper focused on the two morphological causatives, because together they cover the widest distribution range. Though at first glance the division of labor between these two morphemes seems to be determined solely by the presence or absence of transitivity, it was demonstrated that the semantic differences go beyond transitivity. These differences include systematic contrasts in terms of degree of directness in the interaction between Causer and Causee, as

well as levels of agentivity attributed to the Causee, and force dynamics. These differences are shown to have implications for the expression of interpersonal interactions and manipulation.

+ ————— DIRECTNESS, EVENT INTEGRATION ————— -					
DIRECT	DIRECT	SOCIATIVE	INDIR.	PERMISSIVE	DIRECTIVE
PHYSICAL CAUS.	Non-PHYS.				NON CAUS.
LEXICAL CAUS. MBO- MBO- MBO- -UKA VERB <i>heja</i> "let" VERB 'e "tell"					
+ ————— MORPHOLOGICAL COMPACTNESS ————— -					

Figure 1. Continuum of directness/event integration in Guaraní causative constructions

Notes

1. It should be noted that the intransitive predicates corresponding to the causative ones are all marked active.
2. The pair *reko/me'e* differs from the other pairs in the list since the non-causative counterpart, *reko* 'to have' is really not intransitive (it is a two-place predicate). The pair is, however, similar to the other pairs in the list in that the causative counterpart increases the valence of the non-causative by one (in this case, from two to three).
3. This form may be related to the general causative affix /*mV*/, listed in Payne (1990:77–78) as one widespread grammatical form in South American languages. The form shows up as a prefix or suffix with causative meaning in a variety of languages in the region. In Guaraní, it is a versatile prefix with high frequency of occurrence. Its higher frequency and versatility vis-à-vis *-uka* in Guaraní suggests that perhaps the latter is a relatively recent innovation in the language.
4. In the case of causativized nouns, this statement can be a little problematic since nouns are not usually thought of as having an argument structure. However, as will be explained later, a significant number of causativized nouns express inalienable possession, and nouns in this type of possessive relation can be argued to require an argument.
5. Note that *je-* follows the nasal harmony rule and is always nasalized when combined with *mbo-*.
6. An exception to this are body-movement verbs such as *guapy* 'to seat', *pu'ã* 'to get up', and *ñenō* 'to lay down', which, when causativized with *mbo-* necessarily evoke an external causer: *ñe-mbo-guapy* 'to be made to seat', *ñe-mo-pu'ã* 'be made to get up', *ñe-mo-ñenō* 'to be made to lay down'. Perhaps this is because the non-causativized version already carries the meaning of self-induced change in body-posture. Example (18) given above is an actual example of a reflexivized body-movement causative verb.
7. As was noted in Section 3.2.1, CAUS1 is the causative construction with the widest distribution in Guaraní. There is then a difference in frequency of occurrence between CAUS1

and CAUS2, the latter being less frequent and having a more restricted distribution. It is interesting to note in this regard that CAUS2, unlike CAUS1, is not affected by word-internal morpho-phonological processes such as nasal harmony. See, for example (41), which involves a nasal stem.

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