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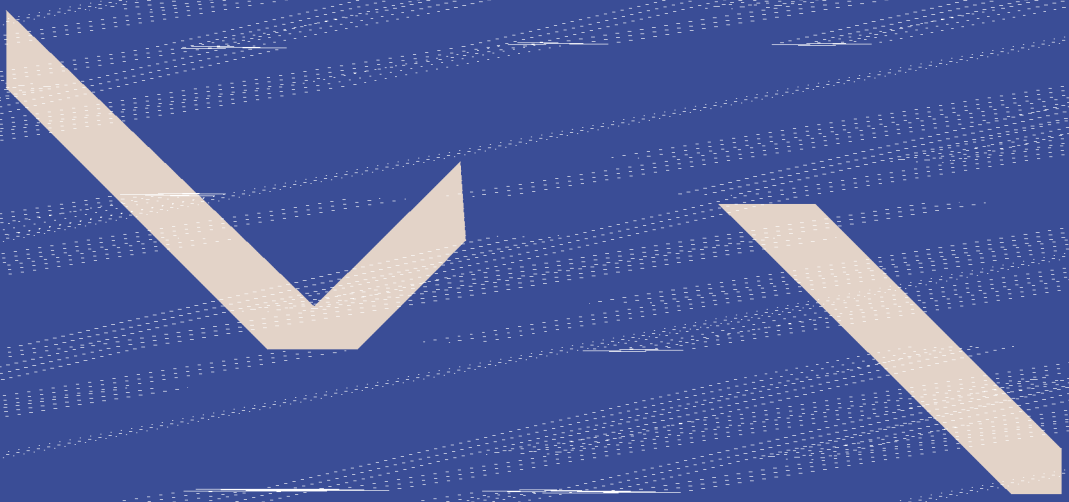
The Locative Syntax of Experiencers

Idan Landau



The Locative Syntax of Experiencers

Linguistic Inquiry Monographs
Samuel Jay Keyser, general editor

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Series Foreword

We are pleased to present the fifty-third in the series *Linguistic Inquiry Monographs*. These monographs present new and original research beyond the scope of the article. We hope they will benefit our field by bringing to it perspectives that will stimulate further research and insight.

Originally published in limited edition, the *Linguistic Inquiry Monographs* are now more widely available. This change is due to the great interest engendered by the series and by the needs of a growing readership. The editors thank the readers for their support and welcome suggestions about future directions for the series.

Samuel Jay Keyser
for the Editorial Board

Acknowledgments

This monograph has greatly benefited from the generous input of many friends and colleagues. Some made passing observations; others provided painstaking theoretical critique. Many had to tolerate my endless queries for data in their native tongues. During its six-year history, it passed through several versions and underwent quite a few revisions. If it is now any closer to Truth than it was at the beginning, no doubt the following people deserve the credit: Elena Anagnostopoulou, Maya Arad, Mark Baltin, Jóhanna Barðdal, Jonathan Bobaljik, Irena Botwinik-Rotem, Lisa Brunetti, Guglielmo Cinque, Alexis Dimitriadis, Marc-Ariel Friedeman, Maria Teresa Guasti, Richard Kayne, Géraldine Legendre, Jim McCloskey, Paul Postal, Liina Pylkkänen, Gilian Ramchand, Halldór Sigurðsson, Arthur Stepanov, and Susi Wurmbrand.

Sections 3.6, 3.7, and 4 are extended, modified versions of Landau 2002a,b. Various parts of this work have been presented during 2001 2002 at the 32nd annual meeting of the North Eastern Linguistic Society (NELS 32), the 18th annual meeting of the Israeli Association of Theoretical Linguistics (IATL 18), ''The Syntax of Aspect'' workshop at Ben Gurion university, and linguistics colloquia at NYU, Tel Aviv, and Bar Ilan universities. I thank the audiences for their input and comments. During 2000 2001 I was supported by the Kreitman Postdoctoral Fellowship at Ben Gurion University.

The Obliqueness of Experiencers

1 Introduction

Experiencers are special. In the eyes of a nonlinguist, this statement may seem too obvious to merit discussion. As we ourselves are the primary species of experiencers, it is hardly surprising that we assign a privileged status to the category of sentient entities capable of mental life. Whether a given entity in our environment is an experiencer or not has vast consequences for our perception and behavior; anyone who has ever had the unsettling experience of walking around a wax museum can testify to that.

But experiencers are not just cognitively special; they are *linguistically* special. Both in the eyes of the linguist and nonlinguist, this ought to be a remarkable fact. Why should the cognitive significance of experiencers have any consequences for the grammar of their language? After all, countless other cognitive categories of equal or greater significance leave no mark in the grammar. Consider the categories of solids, visibles, rigids, edibles, artifacts, tools, moral values, and social institutions, to name just a few. Each of these categories is fundamental to our daily dealings with the world, indeed indispensable. Yet as far as we know, there are no languages that contain grammatical principles of the following forms.

(1) a. If an NP denotes an artifact, it is opaque to extraction.
    b. An NP that denotes something edible must be doubled by a clitic.
    c. An NP that denotes a solid object cannot be anaphorically bound.

Therefore, the fact that experiencers *do* figure in such principles — as we will shortly see — is extremely surprising, even on the (tendentious) view that cognitive primacy has causal effects on the grammar. Notice that this view, in itself, is not self-evident. If the grammar of human language is a natural object, immune to deliberate design, then it should display no more conformity to human concerns than the heavens do.[1] Substituting "natural selection" for "deliberate design" does not take us much further.

Beyond the trivial usefulness of language as a communication system, one can hardly argue for the adaptive value of particular grammatical mechanisms; did homonids whose grammar contained tone spreading, *wh*-islands, or psych effects have a reproductive advantage over those whose grammar did not? Yet the brute fact is that languages *do* exhibit such phenomena, and, in particular, experiencers *are* grammatically special. If this fact can be traced neither to their cognitive significance (why not other significant categories?) nor to the relevance of their significance to the grammar (why should it be relevant?) then it remains a tantalizing puzzle.

How are experiencers grammatically special? This is the subject matter of this monograph. In just about any language where psych(ological) verbs have been studied in any depth, some special properties of these verbs have emerged.[2] Consider a handful of examples (all of which are discussed in detail below).

Example 1 In Greek, clitic doubling of accusative objects is optional; strangely, accusative doubling becomes obligatory in just one case when the object is an experiencer.

(2) a. O Jannis (tin) ghnorise tin Maria se ena party.
The John (cl.ACC) met the Mary in a party
'John met (her) Mary at a party.'
b. Ta epipla ?*(ton) enohlun ton Petro.
the furniture ?*(cl.ACC) bother the Peter
'The furniture bothers Peter.'

Example 2 In many languages, an object anaphor can (and sometimes must) be bound by the local subject; indeed, this is the canonical binding configuration. Such binding fails in a particular kind of psych constructions.

(3) a. John and Mary resemble each other.
b. ?*John and Mary concern each other.

Notice that both verbs in (3) are stative, and in fact, both are unaccusative (e.g., no passive exists). Yet for some reason, the experiencer anaphor cannot be bound by the subject.

Example 3 A well-studied rule of Russian grammar is the Genitive of Negation rule, which shifts the case of direct objects to genitive under clausemate negation. The rule optionally applies to all accusative objects (modulo certain restrictions that are orthogonal to the present discussion) except for experiencers.

(4) a. Ja ne našel tzvety/tzvetov.
I not found flowers.ACC/GEN
'I didn't find (the) flowers.'
b. Šum ne ogorčil ni odnu devočku / *odnoj devočki.
noise.NOM not upset no one.ACC girl.ACC / *one.GEN girl.GEN
'The noise didn't upset a single girl.'

Example 4 Relativization of direct objects in Hebrew can leave a resumptive pronoun in the extraction site, although a gap is slightly preferred. Strikingly, the resumptive pronoun becomes obligatory when the object is an experiencer.

(5) a. ze ha-iš$_1$ še-ha-ma'amar te'er (?oto$_1$).
this the-man that-the-article described (?him)
'This is the man that the article described.'
b. ze ha-iš$_1$ še-ha-ma'amar hid'ig *(oto$_1$).
this the-man that-the-article worried *(him)
'This is the man that the article worried.'

Example 5 In many languages, the only possible controller for a nonfinite adjunct is the matrix subject. A systematic exception to this generalization is that of object experiencers, which unlike all other objects, *can* control adjuncts. The French example below illustrates a minimal contrast between a goal and an experiencer dative (control options are disambiguated by participial gender agreement in the adjunct):

(6) a. [PRO$_{1/*2}$ remis(*e) sur pied], son mari$_1$ s'adresse à Yolande$_2$.
re-put on foot, her husband addressed to Yolande
'Once recovered, her husband addressed Yolande.'
b. [PRO$_{1/2}$ remis(e) sur pied], son mari$_1$ manque à Yolande$_2$.
re-put on foot, her husband misses to Yolande
'Once recovered, Yolande misses her husband.'

These are just a few of what I call *psych effects* specific syntactic properties associated with experiencers. As the examples above suggest, we will be mostly concerned with object experiencers (ObjExp), accusative or dative. The nonexperiencer argument sometimes called the stimulus, trigger of emotion, causer, or target/subject matter will simply be called the *theme*, unless finer distinctions become relevant.

I follow Belletti and Rizzi's (1988) (*henceforth B&R*) tripartite classification of psych verbs.

(7) a. *Class I*: Nominative experiencer, accusative theme.
John loves Mary.

b. *Class II*: Nominative theme, accusative experiencer.
The show amused Bill.
c. *Class III*: Nominative theme, dative experiencer.
The idea appealed to Julie.

An important distinction exists between stative and eventive ObjExp verbs. All class III verbs are stative; consequently, they can never be used agentively. Most class II verbs are ambiguous between the two readings.

(8) a. *The solution is occurring to Mary right now.
b. Bob (*deliberately) mattered to his boss.

(9) a. The noise is scaring Mary right now.
b. John embarrassed Maggie (on purpose/unintentionally).

We will see that the ambiguity in (9b) is grammatical rather than pragmatic: Universally, psych effects are associated only with the nonagentive reading.[3]

The peculiarity of ObjExp verbs has been noted long ago, giving rise to a rich tradition of generative analyses, mainly within the frameworks of Relational Grammar (RG) and Government and Binding (GB) (Lakoff 1970; Postal 1971; Perlmutter 1983; Hermon 1985; Stowell 1986; Pesetsky 1987, 1995; Belletti and Rizzi 1988; Legendre 1989; Cresti 1990; Herschensohn 1992; Bouchard 1995; Anagnostopoulou 1999; Arad 2000; McGinnis 2000, 2001). The fundamental question is: What is the special feature of psych verbs that is responsible for the observed psych effects? Various authors have located that feature in various places: D-Structure, logical form (LF), conceptual structure, aspectual properties, inherent case, zero morphemes, and so on.

The analysis to be developed in this monograph has been inspired by many precursors, and it incorporates some of their insights. Its novelty consists mainly in the attempt to synthesize various ideas, previously unrelated and sometimes underdeveloped, into one coherent theory. This will involve a thorough investigation of available crosslinguistic data, as well as an analysis of novel data from several languages.

The basic intuition that I will pursue is very simple. It can be stated as follows.

(10) Experiencers are mental locations, that is, locatives.

To the extent that this thesis is grammatically, and not just metaphorically, real, two major consequences follow.

(11) a. All object experiencers are oblique (or dative).
b. Experiencers undergo "locative inversion."

Since nonsubject locatives are normally introduced by a preposition, so must object experiencers, if (10) is true. The nontrivial case that falls under (11a) is experiencers in class II, which are bare nominals. If (11a) is correct, this is but an appearance; strictly speaking, there are no bare object experiencers, only oblique ones. Hence, what looks like a bare object experiencer must be the object of a null preposition. This proposal expands on the idea of Hermon (1985) and B&R (1988), that the accusative case on object experiencers is *inherent*. I will argue that the consequences of this simple idea are far-reaching and go well beyond what those authors had suspected. Indeed, there is overwhelming crosslinguistic evidence for (11a), when properly interpreted. Much of this evidence has not been taken as such, and instead has generated a plethora of theoretical proposals. Chapters 2 through 6 of this monograph demonstrate that the simplest idea, in this domain, is actually the right one.

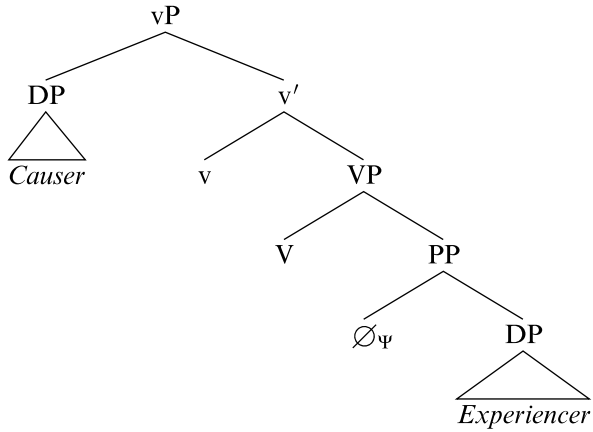
Perhaps more surprising is the claim in (11b); yet again, it should be expected if (10) is true. I will argue that the common phenomenon of *quirky* experiencers is but an instance of locative inversion. More controversially, I will argue that even object experiencers are quirky, in the sense that they too undergo raising to the subject position only at LF, explaining their peculiar scopal properties. Chapters 7 through 9 explore the consequences of this idea.

In fact, this is the whole story; nothing more controversial than (11) will show up along the way. The complexity of the theoretical argument will result from the intricate interactions of the claims in (11) with various components of the grammar. A methodological benefit is the demonstration of the explanatory efficacy of very simple assumptions across a broad range of crosslinguistic data; the low ratio of theory to facts is a significant argument in favor of the present analysis.

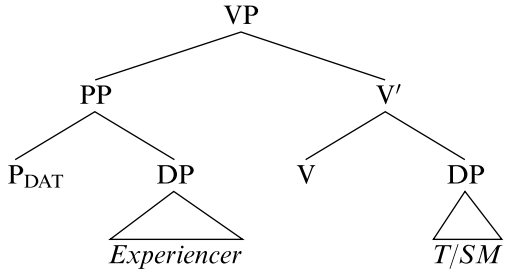
Before we turn to the empirical discussion, it would be useful to have in mind a concrete structural representation for the constructions under study. Naturally, every bit of that structure will be discussed and justified in the chapters to follow. Limiting myself to the VP-structure at the moment, and following the extensive discussion in Pesetsky 1995 and Iwata 1995, I assume that class II verbs are transitive, projecting a light *v* and an external argument, the causer.[4] The null preposition, introducing the experiencer, is termed $\varnothing_{\Psi}$. I also follow the standard assumption that class III verbs are unaccusative (Perlmutter 1983; Belletti and Rizzi 1988; Legendre 1989; Pesetsky 1995; Arad 1998; Reinhart 2001). The "theme" argument of these verbs is not a causer but rather a target/subject matter, T/SM (Pesetsky 1995). In languages where the dative marker is not an

independent preposition, class III experiencers are also governed by $\varnothing_{\Psi}$, which assigns dative case.

(12) a. *Class II Verbs*



b. *Class III Verbs*



2 A Preposition for Experiencers

2.1 Experiencers as Mental Locations

Exactly how mental experiences are conceptualized is a fascinating topic, albeit one we have no direct access to. Evidence bearing on this question must be indirect, and it so happens that most of it is linguistic. Thus, it is a common research strategy to seek clues as to the nature of thought and conceptual structure in the linguistic forms in which they are encoded. This strategy rests on the assumption that language is transparent to thought, or at least not entirely opaque.

However, there is no reason to grant such an assumption prior to empirical inquiry into specific domains. To take a trivial example, it is common to assume that logical reasoning employs some form of predicate calculus, where predicates are applied to arguments in a systematic fashion. Yet as is well known, predication relations are not transparently "read off" linguistic surface structures; often, the logical predicate does not correspond to a unique syntactic predicate (e.g., complex predicates), nor is the argument syntactically isolable (e.g., incorporated pronouns, traces). The point is simple but worth stressing: Language is perhaps the most powerful vehicle of thought, but a vehicle is not necessarily a mirror, and linguistic insights into the nature of the conceptual system must be argued for on a case-by-case basis.

Bearing these cautionary notes in mind, I would nevertheless like to suggest that the linguistic encoding of mental experiences is potentially informative as to their conceptual representation. The argument will be strictly linguistic, hence subject to the above limitations. However, to the extent that we come up with general, universal principles that structure the linguistic expression of psychological predicates, it is legitimate to ask why these particular principles obtain and not others. Let us briefly review some pertinent proposals.

That cognitive relations can be, and in fact are, conceptualized as extended spatial relations is an idea whose appeal has been recognized in various contexts. Discussions of this parallelism are often informed by the way language encodes psychological relations and experiencers. The basic intuition is that it is very natural to conceive of experiencers as mental locations containers or destinations of mental states/effects. Jackendoff (1990, 300, n. 4) suggests that (13a) is conceptually represented as (13b), which roughly reads as (13c).

(13) a. X frightens Y.
b. [CS^{+} ([X]$^{\alpha}$, [INCH [BE ([FEAR ([α])], [AT [Y]])]])]
c. X causes fear of X to come to be in Y.

In this decomposition, the mental state itself is ''extracted'' from the verb and stands as a coargument of the experiencer. Importantly, the latter is the object of a (conceptual analogue of a) preposition, which locates the mental state within it.[1] Along similar lines, Bouchard (1995) maintains that psychological relations are modeled on the spatial relation of *contact*. Like Jackendoff, Bouchard assumes that the mental state is an independent semantic argument, which he terms *psy-chose*: ''in mental space, the psy-chose is somehow put in contact with the argument it affects. This argument must be an entity capable of hosting the emotion or feeling that the psy-chose refers to'' (1995, 272). Unlike Jackendoff, however, Bouchard makes the more radical claim that the psy-chose is also a *syntactic* argument. It may stand on its own, as in periphrastic psych constructions (14a), or it may be incorporated into the verb, as in standard ObjExp verbs (14b).

(14) a. Cela a éveillé en Pierre une rage terrible. (French)
'That awoke in Pierre a terrible rage.'
b. Cela a enragé Pierre.
'That enraged Pierre.'
(Bouchard 1995, 275, (35a,c))

Notice that the syntactic question is logically independent of the semantic question. Although it is quite possible that at some conceptual level, psych verbs are decomposed into an ''action'' light verb plus a mental state (psy-chose), it does not follow automatically that this decomposition goes all the way down to syntax. In fact, one may still argue, as I will below, that the locative preposition *is* syntactically active even when the experiencer appears to be a bare nominal, whereas the mental state is syntactically active only when visible, namely, in periphrastic constructions.

Bouchard's syntactic decomposition (also adopted by Arad 1998, 2000) cannot be motivated on semantic grounds alone.[2]

In what follows I will leave the cognitive-conceptual questions in the background, restricting my conclusions to the "interface" level the level where general concepts are given a grammatical mold. I am hopeful that an insightful linkage is within the reach of future research.

2.1.1 Subject-Experiencer Verbs

Arad (1998) argues explicitly that stative SubjExp verbs denote locative relations. The experiencer is either conceived as the "stuff" contained in the mental state or the container in which the mental state resides.

(15) a. Nina is in love (with Paul).
b. There is in me a great admiration for painters.
(Arad 1998, 228, (83))

It is the latter option the experiencer as location that is of major concern here. As can be seen in the sample below, this option is extremely common and productive across languages. Frequently, as in Hebrew, French, and Navajo (see below), one finds periphrastic constructions constructed with the verbs *be*/*have*, a psych noun and an experiencer-location.

(16) a. yeš be-Gil eyva gdola klapey soxney bituax.
there-is in-Gil rancor great toward agents-of insurance
'Gil has a great rancor toward insurance agents.'
b. yeš be-tox Rina tšuka amitit le-omanut.
there-is inside Rina passion real to-art
'Inside Rina there is a real passion for art.'

(17) a. Paul a peur de Marie.
Paul has fear of Marie
'Paul is afraid of Marie.'
b. Il ne pouvait plus contenir sa rage.
he not could more to-contain his rage
'He could no longer contain his rage.'
(Bouchard 1995, 266, (13a,g))

(18) a. shil hóóyéé.
with-me, became fear
'I am terrified.'
b. shil yá' át' ééh.
with me, it is good
'I like it.'
(Jelinek and Willie 1996, (36, 37))

It is particularly telling that in some langauges, subject experiencer verbs almost exclusively take this locative form. In Irish and Scottish Gaelic, nominative experiencers hardly exist; one finds instead oblique experiencers, introduced by locative prepositions (significantly, the same is true of ObjExp verbs, to which we turn below).

(19) a. Tà fuath do Y ag X.
is hatred to Y at X
'X hates Y.'
b. Tà eagla roimh Y ar X.
is fear before Y on X
'X is afraid of Y.'
(McCloskey and Sells 1988, (76a, 77a))

(20) a. Is toil leam filmichean.
COP.Pres pleasure with-me films
'I like films/films are pleasing to me.'
b. Tha gaol aig Catriona air Padraig.
Be.Pres love at Catriona on Padraig
'Catriona loves Padraig.'
(G. Ramchand, pers. comm.)

Some researchers have proposed that SubjExp verbs are *always* constructed with an abstract preposition, even in languages where no direct evidence for this is available (Hale and Keyser 1999; Doron 2003). Although I think this position is tendentious (see n. 6, this chap.), I do believe that at some grammatically relevant level of lexical semantics, subject experiencers are indeed associated with (mental) locations. This may reflect a general linking principle (see Kuno 1971; Clark 1978; Fernandez-Soriano 1999).

(21) The canonical grammatical realization of location is subject or oblique.

Within LFG, this generalization is captured by the assumption that locatives are intrinsically classified as [−o] (nonobjective), and unspecified for [r]. Subsequent classification as [−r] (nonrestricted) or [+r] (restricted) yield the grammatical functions of subject [−r, −o] or oblique [+r, −o], respectively (Bresnan and Kanerva 1989).[3]

Subject experiencers exhibit semantic parallels with locations even in languages like English, where they always take the nominative (nonoblique) form. Speas (1990) draws attention to the fact that subject

experiencers introduce a path, either as a goal or a source, unlike non-experiencer subjects.

(22) a. I got angry but it went away.
b. ??I laughed but it went away.

(23) a. I tried to remember his name, but it wouldn't come to me.
b. ??I tried to write his name, but it wouldn't come to me.[4]
(Speas 1990, (3, 7))

This, according to Speas, is evidence that the difference between the dative experiencer subjects of South Asian languages (e.g., Malayalam) and the nominative experiencer subjects of English is strictly syntactic; conceptually, both language types treat experiencers as locations.

South Asian languages, indeed, provide ample evidence for the tight connection between experiencers and goals/locations (Verma and Mohanan 1990). In Marathi, an Indo-Aryan language, the dative marker that occurs with experiencers alternates with locative postpositions in other contexts. According to Pandharipande (1990), experiencers in this language are nothing but locatives marked [+animate]. Mohanan and Mohanan (1990) claim that the source of the dative case on certain subject experiencers in Malayalam is precisely their being classified as thematic goals. Frequently, these dative subjects cooccur with the light verb 'come', highlighting their directional interpretation:[5]

(24) a. baalan baalakaye weruṯṯu
boy.NOM girl.ACC hate-PAST
'The boy hated the girl.'
b. baalanə baalikayooṭə weruppə waṉṉu.
boy.DAT girl.COM hatred-NOM come.PAST
'The boy felt hatred for the girl.'
(Lit.: 'To the boy came hatred for the girl.')

The underlying locative character of subject experiencer sometimes emerges in unexpected contexts. In Hebrew, there exists a paradigm of adjectival passives, *beynoni pa'ul*, which expresses the original (verbal) external argument in a *by*-phrase. Consider the following nonpsych examples:

(25) a. ha-sefer arux al-yedey orex mikco'i.
the-book edited by editor professional
'The book is edited by a professional editor.'

b. ha-šetax kavuš al-yedey cava zar.
the-area occupied by army foreign
'The area is occupied by a foreign army.'

The original external argument cannot always be expressed in this way; being lexically derived, adjectival passives may idiosyncratically fail to take a *by*-phrase (see Doron 2000, from which the present examples are drawn). Crucially, though, in such cases, no alternative preposition can save the sentence.

(26) a. *ha-xalon šavur al-yedey/me-/be-/al pirxaxim.
the-window broken by/from/in/on rogues
'The window is broken by rogues.'
b. *ha-degel karu'a al-yedey/me-/be-/al mafginim.
the-flag torn by/from/in/on demonstrators
'The flag is torn by demonstrators.'

There is one case, however, in which the preposition *al-yedey* 'by' is supplanted by a different preposition: Subject experiencer verbs. In the *beynoni pa'ul* of these verbs, the original external argument the experiencer surfaces with the locative preposition *al* 'on' (27a). This is particularly striking because the verbal passive and the passive process nominal select the standard *by*-phrase (27b,c):

(27) a. ha-šir ha-ze a'huv/mu'adaf al/*al-yedey harbe ma'azinim.
the-song the-this loved/preferred on/*by many listeners
'This song is loved/preferred(Adj) by many listeners.'
b. ha-šir ha-ze ne'ehav/hu'adaf al-yedey/*al
the-song the-this was-loved/was-preferred by/*on
harbe ma'azinim.
many listeners
'This song was loved/preferred(V) by many listeners.'
c. ahavat/ha'adafat ha-šir ha-ze al-yedey/*al harbe ma'azinim.
love/preference the-song the-this by/*on many listeners
'The love/preference for this song by many listeners.'

Moreover, the same preposition shows up with these verbs in a different context lexical causativization. Normally, when transitive verbs are lexically causativized in Hebrew, two alternatives are available: (i) The original subject becomes accusative, and the original object becomes oblique (or, in some verbs, a second accusative); or (ii) The original subject becomes dative, and the original object remains accusative. The two options are illustrated in (28a,b) and (28c,d), respectively.

(28) a. Rina lavša xulca.
Rina wore shirt
'Rina wore a shirt.'
b. Gil hilbiš et Rina be-xulca.
Gil dress ACC Rina in-shirt
'Gil dressed Rina with a shirt.'
c. Rina katva mixtav.
Rina wrote letter
'Rina wrote a letter.'
d. Gil hixtiv le-Rina et ha-mixtav.
Gil dictated to-Rina ACC the-letter
'Gil dictated the letter to Rina.'

Subject experiencer transitives and as far as I know, only them display a third alternative: The original object remains accusative, and the original subject the experiencer becomes oblique, again with the preposition *al* 'on'.

(29) a. Gil sana/xibev et beyt-ha-sefer.
Gil hated/like ACC the-school
'Gil hated/liked school.'
b. Rina hisni'a/xibeva al Gil et beyt-ha-sefer.
Rina caused-to-hate/like on Gil ACC the-school
'Rina made Gil hate/like school.'

The fact that the two phenomena discussed above single out subject experiencers from all other subjects, and furthermore, do so with the aid of a locative preposition, can be no accident. I trace it to the inherently locative nature of experiencers, even when occurring as bare nominals in subject positions.[6]

2.1.2 Object-Experiencer Verbs

The locative character of experiencers becomes eminently clear when we turn our attention to object experiencers. Indeed, the entire first half of this monograph is an attempt to establish this striking property across as many languages as possible. In this section, I limit myself to languages where the obliqueness of experiencers is morphologically overt.

Crosslinguistically, we find the following picture.

(30) a. In *many* languages, object experiencers *can* be oblique.
b. In *some* languages, object experiencers *must* be oblique.

Consider first (30a). It has been noted in the past that psychological predicates can be expressed periphrastically, with a light verb selecting a mental-state nominal followed by a preposition, which introduces the experiencer.

(31) a. ha-seret hipil paxad *al Gil*. (Hebrew)
the-movie dropped fear on Gil
'The movie frightened Gil.'
b. ha-mar'e orer *be-Gil* hitragšut raba.
the-sight evoked in-Gil excitement a lot
'The sight excited Gil very much.'

(32) a. Jean donne du soucis *à Marie*. (French)
Jean gives some worry to Marie
'Jean worries Marie.'
b. Il y a *en Pierre* un profond mépris de l'argent.
there is in Pierre a deep contempt of money
'There is in Pierre a deep contempt of money.'
(Bouchard 1995, 266, (13c,d))

Jelinek and Willie (1996) observe that experiencers in Navajo surface either as subjects or prepositional objects, in line with (21). In particular, there are no direct object experiencers in the language. The oblique cases are of two types: (i) Comitative stative verbs, which take a pleonastic subject and introduce the experiencer with the postposition *ł* 'with' (see (18) above); (ii) Causative verbs, occurring with various prepositions. The latter type is illustrated below.

(33) a. shá hóóchłįįd.
1s-**for** HO-3-cause become nasty
'He made me mad.'
(Lit., 'He made "things" become nasty for me.')
b. shiyaa hodeexiz.
1s-**under** HO-3-caused to spin
'He startled me.'
(Jelinek and Willie 1996, (48, 50))

Jelinek and Willie attribute the lack of accusative experiencers in Navajo to the requirement in that language that direct objects be "affected." Yet that seems doubtful for the causative cases, where the experiencer is clearly affected by the theme/causer argument.[7] Rather, Navajo grammar appears to map notional locations only to their canonical grammatical

realizations subjects and obliques. Since experiencers are encoded as mental locations, they too are found only in these grammatical functions.

Spanish is another language where the prepositional character of experiencers is marked overtly. According to Franco (1990), the distinction between classes II and III in Spanish is morphologically blurred; some dialects mark all object experiencers as dative. However, ''there are some dialects of Spanish, especially from the Southern Cone of Latin America and some areas of Spain, in which homophonous forms of experiencer verbs allow an alternation accusative-dative in the case marking of experiencer arguments'' (Franco 1990, 46). The case distinction is visible in the clitic doubling the object (the latter, when animate, is always morphologically dative in Spanish).

(34) a. Ese tipo de comentarios le_1 enojan a $Juan_1$.
that type of comments cl.DAT anger to Juan
'That type of comments anger Juan.'
b. María lo_1 enojó a $Juan_1$.
Maria cl.ACC anger to Juan
'Maria angered Juan.'
(Franco 1990, (3))

Crucially, Franco points out that the subject of (34a) is understood as a theme whereas the subject of (34b) must be understood as an agent. Furthermore, in all Spanish dialects, certain psych verbs never allow an accusative experiencer.

(35) María le_1/*lo_1 gusta a $Juan_1$.
Maria cl.DAT/*ACC like to Juan
'Juan likes Maria.'
(Franco 1990, (12))

Unlike (34b), (35) cannot be interpreted agentively. A natural way of interpreting these facts is the following. (34) instantiates class II in Spanish (hence the ambiguity); (35) instantiates class III (hence the nonambiguity). Suppose that in the dialects represented here, the preposition associated with object experiencers is uniformly the dative preposition; that is, these dialects lack the null preposition $\varnothing_{\Psi}$. Then bona fide accusative experiencers will generally be ruled out.

The object in (34b), then, is more akin to a *patient* than to an *experiencer*; it undergoes a change of state that happens to be mental, but it does not function as a mental location as it does in (34a) and (35). We return to this puzzling split in section 9.3. For now, it is sufficient to note

the pervasiveness of this pattern. Again and again, we will see that the special behavior of psych verbs is limited to nonagentive contexts; when used agentively, they pattern with normal transitives. Indeed, the fact that a certain psych effect disappears in agentive contexts does not undermine its reliability; on the contrary, it can (and will) be seen as an indication that it is a genuine effect.[8]

A similar pattern emerges in Irish. In the previous section we have seen that SubjExp verbs in this language are often rendered as small clause complements to the verb *be*, composed of a DP (the mental state) and a PP (the experiencer). ObjExp verbs are constructed in the same manner, only the main verb is *put*. Consider the following data from Irish (J. McCloskey, pers. comm.).

(36) a. Chuir sin eagla orm.
put that fear on-me
'That frightened me.'
b. Chuir sin fearg orm.
put that anger on-me
'That angered me.'
c. Chuir sin iontas orm
put that wonder on-me
'That surprised me.'

Interestingly (as in Spanish), the oblique experiencer correlates with a nonagentive subject (37a,b). Whenever the subject is a volitional agent, a transitive structure must be used instead (37c).

(37) a. Chuir a aghaidh eagla orm.
put his face fear on-me
'His face frightened me.'
b. Chuir sé eagla orm (*d'aon ghnó).
put he fear on-me (*on-purpose)
'He frightened me (*deliberately).' [only nonagentive]
c. Scanraigh sé mé (d'aon ghnó).
frightened he me (on purpose)
'He frightened me (deliberately).'

This contrast is also preserved in cases where the psych predicate is a verb, proving that the choice between PP and DP complements does not simply follow from the category of the psych predicate (N vs. V). For example, Irish has two verbs *goill* and *goin* meaning 'hurt, distress'. The former takes a PP-complement; the latter is transitive. Indeed, only the transitive verb can be used in agentive contexts.

(38) a. Ghoill a bhás orm.
distressed his death on-me
'His death distressed me.'
b. Ghoill sí orm (*d'aon ghnó).
hurt she on-me (*on-purpose)
'She hurt me (*deliberately).' [only nonagentive]
c. Ghoin sí mé (d'aon ghnó)
hurt she me (on purpose)
'She hurt me (deliberately).'

The correlation goes only one way: An oblique construction forces a nonagentive reading, but a transitive construction does not force an agentive reading. Examples (37c) and (38c) allow a nonagentive reading, and transitive class II verbs are compatible with inanimate subjects.

(39) Ghoin mo choinsias mé.
wound my conscience me
'My conscience bothered me.'

We can interpret these facts in the following way. Object experiencers in nonagentive psych constructions are universally oblique. In most languages, the preposition governing the experiencer is null ($\varnothing_\Psi$). Irish is special in lexicalizing a whole paradigm of psych predicates where that preposition is overt (usually, *ar*, 'on'). The "transitive" psych constructions are in fact transitive only in agentive contexts, whereas the nonagentive context involves a PP headed by $\varnothing_\Psi$ (as in English). The extent to which psych prepositions are lexicalized may vary between languages and language stages. It appears that Scottish Gaelic used to be like Irish in reserving the transitive construction for agentive contexts; however, these forms became archaic, and at present object experiencers in the language are oblique in all contexts (G. Ramchand, pers. comm.).

2.2 Inherent Case on the Experiencer

Suppose that languages like Navajo, Irish, and Scottish Gaelic, rather than displaying an esoteric pattern, genuinely represent the universal case. That is, suppose that (30b) is *universally* true, and object experiencers are always oblique; only this is not visible in all languages. That would mean that superficially accusative experiencers in any language are, in fact, underlyingly oblique. Let us pursue this intuition in greater detail, starting with the notion of inherent case.

That the experiencer DP bears inherent case was first suggested by Hermon (1985) and later adopted and expanded by Belletti and Rizzi (1988). The motivation was primarily theoretical. The cornerstone of B&R's analysis was the claim that psych verbs of classes II and III are unaccusatives. This was unproblematic for class III verbs, which assign dative case to the experiencer and select the auxiliary *essere*. However, class II verbs display two properties that are never found with unaccusatives: They select the auxiliary *avere*, and assign accusative case, in apparent violation of Burzio's generalization. B&R handled the first problem by revising the condition on auxiliary selection ("V selects *avere* iff it can assign morphological accusative"), and the second problem by arguing that class II verbs assign *inherent* accusative, whereas Burzio's generalization only regulates the assignment of *structural* accusative. Thus, inherent accusative can be assigned even in the absence of an external argument.

We will see below (following Pesetsky 1995) that the motivation behind this reasoning is no longer valid. That is, class II verbs at least most of them are *not* unaccusatives. Therefore, no familiar theoretical principle forces them to assign inherent accusative to the experiencer. But that still leaves open the *empirical* question: Do they assign inherent accusative or do they not? B&R may have made a correct factual claim for the wrong theoretical reasons. In fact, I will argue just that, on a larger scale:

(40) Universally, non-nominative experiencers bear inherent case.

Again, the claim is trivial for class III verbs, and extremely nontrivial for class II verbs.[9] Notice that (40) could be correct even if we lack a clear understanding why this is so. This is, in fact, the status of quite a few generalizations within current theories (e.g., Burzio's generalization, EPP, clause-boundedness of QR, etc.). Thus, Grimshaw's (1990) objection that the status of inherent case is stipulated in B&R's theory was correct but premature.

My purpose in the following sections is to argue that B&R's claim, although based on false premises and applied only to Italian, is universally valid. There is overwhelming crosslinguistic evidence that the accusative case on experiencer DPs in class II is "nonstandard"; in fact, in every language that has been seriously studied, some contrasts emerge between experiencer and nonexperiencer objects that can be traced to the nature of the accusative case they bear. This point has been made sporadically by some authors (Arad 1998, 2000; Anagnostopoulou 1999), but the actual scope of the phenomenon has not been fully realized; hence I think it is an effort worth making. I take this fact to be the most significant as-

pect of the syntax of psych verbs, and the analysis to be developed will naturally capitalize on its consequences.

2.3 Some Assumptions about Inherent Case

Before laying out the crosslinguistic evidence, we should spell out what we mean by "inherent case." Here I follow the traditional distinction, introduced by Chomsky (1981), between inherent and structural case. Unlike structural case, which is assigned/checked in the syntax in certain configurations (government, spec-head, *Agree*, etc.) irrespective of thematic roles, inherent case is assigned in the lexicon and is tied to a specific θ-role. Indeed, one should see inherent case as an inseparable reflex of θ-role assignment. The primary examples of structural case are nominative/ergative and accusative/absolutive. The dative case is more complex, being structural in specific languages and contexts (e.g., double object constructions in English and Japanese, Romance causatives) and inherent in others (Romance double object constructions). Note that there is no uniform correlation between the morphological classification of a given case and its syntactic status (structural/inherent); nor should we expect such a trivial relation between morphology and syntax.

How is inherent case represented in the syntax? Is it a feature of nouns, or does it have a phrase-structure realization?[10] I will follow Emonds (1985) in assuming the latter. The reasons and motivation will become clear as we proceed.

(41) Universally, inherent case is assigned by P.

It follows from (41) that nominals marked for inherent case are always dominated by a PP node. This PP may be headed by a lexical P (as in English obliques) or a null P (as in Latin obliques), but both cases are structurally distinct from bare DPs. Emonds argues further that null Ps are subject to a version of the Empty Category Principle, a claim that I remain neutral about. Null prepositions play a key role in syntactic analyses of double object constructions, bare NP adverbs, and relative clauses (Czepluch 1982; Kayne 1984; Larson 1987; Emonds 1987; McCawley 1988; Pesetsky 1995; den Dikken 1995; Baker 1997). As it turns out, the simple idea that experiencers in classes II and III are PPs will prove extremely illuminating for the analysis of psych constructions.

Two major properties of accusative experiencers follow from the above characterization of inherent case.

(42) a. The experiencer should display PP/dative behavior.
b. The case of the experiencer should resist syntactic suppression.

Property (42a) follows trivially from Emonds's conception of inherent case. Notice that there is no strong entailment that accusative experiencers should behave like PPs in all respects and in all languages. Surely nothing that strong holds of inherently case-marked DPs in general. It is an empirical question which grammatical processes "see" the null P that governs the experiencer DP and which do not. Possibly, the ability of null P to incorporate into (reanalyze with) the verb will correlate with DP-behavior. Thus languages like English, where V+P reanalysis is relatively common, will display fewer psych effects than languages where this process is more marked.

Property (42b) reflects the fact that inherent case is a lexical property, and syntax rarely manipulates such properties (the Projection Principle). Consider NP-movement to the subject position. Barring quirky subjects, such a movement results in the assignment (checking) of nominative case to the promoted argument. If that argument already bears inherent case that cannot be suppressed, we expect a clash. This will rule out NP-movement of the accusative experiencer, unless V+P reanalysis is available ("pseudo-passive"). The consequences of these properties are explored below across a wide range of languages.

3 Core Psych Properties

3.1 Italian

Belletti and Rizzi (1988, n. 27) cite an observation by Benincà (1986): When dislocated, the experiencer object of class II verbs can surface as a dative associated with an accusative clitic. This option is not available for standard accusative objects, as in class I verbs.

(43) a. A Giorgio, questi argomenti non l'hanno convinto.
to Giorgio, these arguments not him-have convinced
b. *A Giorgio, la gente non lo conosce.
to Giorgio, people not him know

This pattern will emerge in other languages as well: In various syntactic contexts particularly, Ā-chains accusative experiencers reveal a dative-like, or PP-like behavior. If (40) and (41) are true, this behavior is expected.[1]

B&R discuss another peculiarity of accusative experiencers, which they do not attribute to inherent case, but which nonetheless can be understood along these lines. Unlike canonical direct objects, which are transparent to extraction, objects of class II verbs are islands. This is illustrated in (44) for *wh*-extraction and in (45) for *ne*-extraction (yielding a milder violation):[2]

(44) a. Il candidato di cui questa ragazza apprezza i sostenitori.
the candidate of whom this girl likes the supporters
b. *Il candidato di cui questa prospettiva impaurisce
the candidate of whom this perspective frightens
i sostenitori.
the supporters
(B&R 1988, (86))

(45) a. Gianni ne trascorrerà tre a Milano.
Gianni of-them will-spend three in Milano
(B&R 1981, (II-c))
b. *?Questo fatto ne preoccupa il presidente.
this fact of-it worries the president
c. ??Questo fatto ne preoccupa molti.
this fact of-them worries many
(B&R 1988, (96))

Extraction is possible in agentive contexts, as Arad (2000) points out.

(46) La ragazza di cui Gianni spaventa i genitori perché
the girl of which Gianni frightens the parents for
gliela facessero sposare.
him.DAT-her.ACC make.3pl marry
'The girl whose parents Gianni frightens so that they will allow him to marry her.'
(Arad 2000, (12b))

B&R attribute the islandhood of the experiencer to its "second object" position; in their analysis, the experiencer is a sister to V′, and hence not directly L-marked by the verb. This proposal raises some technical problems with more recent theories that incorporate VP-shells and dispense with nonbranching projections. However, an alternative account is available within B&R's own system, which utilizes the idea that the experiencer bears an inherent case. Assuming that inherent case is syntactically represented as PP, we substitute structure (47c) for B&R's (47b).

(47) a. This perspective frightens the supporters of John.
b. [$_{VP}$ [$_{DP}$ the supporters of John] [$_{V'}$ frightens [$_{DP}$ this perspective]]]
c. [$_{VP}$ [$_{PP}$ $\varnothing_{\Psi}$ [$_{DP}$ the supporters of John]] [$_{V'}$ frightens [$_{DP}$ this perspective]]]

For B&R, *the supporters of John* is an island in (47b) because it is a sister to V′; for us, it is an island in (47c) because it is a PP. Notice that it is independently established that PPs are opaque to extraction (preposition stranding is both lexically restricted and crosslinguistically rare), whereas specifiers of VP-shells other than the external argument are not. Furthermore, under B&R's analysis the facts in (43) and those in (44) (45) are unrelated, whereas under the present proposal they both reduce (as do many other facts) to the PP-status of the experiencer argument.

3.2 Russian

A well-studied construction in Russian reliably distinguishes structural case from inherent case. The Genitive of Negation (GN) rule, which shifts the case of direct objects to genitive under clausemate negation, obeys a Non-Obliqueness Restriction (Babby 1978, 1986; Pesetsky 1982): Only accusative objects undergo this rule.

(48) a. Ja našel tzvety/*tzvetov.
I found flowers.ACC/*GEN
'I found (the) flowers.'
b. Ja ne našel tzvety/tzvetov.
I not found flowers.ACC/GEN
'I didn't find (the) flowers.'

(49) a. On upravljal fabrikoj/*fabriki.
he managed factory.INST/*GEN
'He managed a/the factory.'
b. On ne upravljal fabrikoj/*fabriki.
he not managed factory.INST/*GEN
'He didn't manage a/the factory.'
(Pereltsvaig 1997, (2), (1))

A standard account of this contrast exploits the fact that inherent case is fixed in the lexicon; GN, which is a syntactic rule, cannot override this case (see (42b)).

Strikingly, accusative experiencers of class II verbs resist GN, just like other obliques.

(50) a. *Ètot šum ne pobespokoil ni odnoj devočki.
that noise.NOM not bothered not one girl.GEN
'That noise did not bother a single girl.'
b. *Ego neudacca ne ogorčila materi.
his failure.NOM not upset mother.GEN
'His failure did not upset mother.'
(Legendre and Akimova 1993, (40))

Although Legendre and Akimova have not checked this, it can be shown that GN fails only in nonagentive contexts by now a familiar restriction on psych effects.

(51) a. Maša naročno ne ogorčila ni odnu
Maša.NOM deliberately not upset no one

devočku/odnoj devočki.
girl.ACC/GEN
'Maša deliberately didn't upset a single girl.'

b. Šum ne ogorčil ni odnu devočku/*odnoj devočki.
noise.NOM not upset no one girl.ACC/*GEN
'The noise didn't upset a single girl.'
(A. Genin, pers. comm.)

Legendre and Akimova, working within Relational Grammar (RG), assumed that experiencers are deep subjects (initial 1s), which are demoted to surface objects (final 2s) in class II. Their failure to license the GN rule is a challenge to the standard RG description, by which the rule applies to working 2s (i.e., any argument that is a direct object at some level and remains a term at the final level). Final 2s are, perforce, working 2s, so the ungrammaticality of (50) is unexpected. To handle that, Legendre and Akimova proposed modifying the GN rule to the effect that it applies only to working 2s *that are not initial 1s*.

Notice that this proviso is designed solely to exclude accusative experiencers from the jurisdiction of the GN rule. As such, it is suspiciously ad hoc. By contrast, the present analysis assimilates the facts of (50) to those of (49): Accusative experiencers in non-agentive contexts fail to license GN because they are oblique. Since the Non-Obliqueness Restriction on GN (and other processes) is independently motivated in Russian grammar, no further stipulation is needed to account for the data.[3]

3.3 Greek

Anagnostopoulou (1999) shows that in two diagnostic environments, accusative experiencers pattern with (dative) indirect objects rather than direct objects. In Greek, clitics doubling direct objects are (i) optional and (ii) anaphoric to explicit discourse antecedents (i.e., impossible with novel or accommodative definites). These two properties are illustrated in (52a) and (52b), respectively.

(52) a. O Jannis (tin) ghnorise tin Maria se ena party.
The John (cl.ACC) met the Mary in a party
'John met (her) Mary at a party.'

b. Prin apo ligo kero eghrapsa mia vivliokrisia jia *ena kenourjo vivlio pano sto clitic doubling.*
'Some time ago, I reviewed a new book on clitic doubling.'

#Arghotera *ton* sinandisa *ton sigrafea* se ena taksidhi mu.
later-on cl.ACC met-I the author in a trip my
'Later on, I met him the author during a trip of mine.'
(Anagnostopoulou 1999, (24a, 25a,b))

(52b) shows that doubling the direct object *ton sigrafea* is infelicitous in a context where it may satisfy the familiarity condition on definites only via accommodation. Compare the situation with psych verbs of class II (where (53b) is a continuation of the first sentence of (52b)):

(53) a. Ta epipla ?*(ton) enohlun ton Petro.
the furniture ?*(cl.ACC) bothers the Peter
'The furniture bothers Peter.'
b. I kritiki mu *ton* enohlise *ton sigrafea* toso oste na
The criticism my cl.ACC bothered the author such that SUBJ
paraponethi ston ekdhoti.
complain to-the editor
'My criricism bothered the author so much that he complained about it to the editor.'
(Anagnostopoulou 1999, (33), (25c))

(53a) shows that unlike direct object doubling, the accusative clitic is obligatory in class II. (53b) shows that this grammatical constraint overrides the pragmatic condition, licensing the clitic even with accommodative definite objects.

This peculiarity of accusative experiencers in Standard Greek (SG) may well fall together with a more pervasive pattern of obligatory clitic doubling in Macedonian Greek (MG), spoken in northern Greece. As reported by Dimitriadis (1999), in this dialect the goal argument of ditransitives may be expressed either as a periphrastic PP or as an accusative object (second to the accusative theme). In the latter case, it must be doubled by a clitic. Moreover, this accusative goal displays typical properties of oblique arguments (A. Dimitriadis, pers. comm.) it cannot be passivized and it must be resumed in relative clauses (see the SG examples below). Accusative objects of certain other oblique verbs and prepositions in MG also must be doubled. Thus, there seems to be a generelization (at least in Greek) to the effect that oblique accusative arguments must be doubled by a clitic. Plausibly, as Dimitriadis suggests, clitic doubling in these environments is triggered by case considerations, the verb (or prepositions) being a defective case marker on its own. The fact that accusative experiencers fall under this general pattern strengthens the conclusion that they too bear inherent case.[4]

The second environment that brings out the underlying oblique character of accusative experiencers is relativization. Canonical definite direct objects in Greek cannot be resumed by a clitic pronoun when relativized (54a); by contrast, relativization of the ''shifted'' dative argument in a double object construction is impossible unless a resumptive pronoun is present (54b) (the same contrast appears in English).

(54) a. Simbatho ton anthropo pu (*ton) sinantise o Petros.
like-1sg. the man that (*cl.ACC) met.3sg the Peter.NOM
'I like the man that Peter met (*him).'

b. Simbatho ton anthropo pu o Petros *(tu) edhose
like-1sg. the man that the Peter.NOM *(cl.DAT) gave
to vivlio
the book.
'I like the man$_1$ that Peter gave *(him$_1$) the book.'
(Anagnostopoulou 1999, (28), (30), (27a), (29))

Here as well, accusative experiencers pattern with the dative case, requiring resumption.

(55) O anthropos pu *(ton) provlimatizun ta nea bike mesa.
the man that *(cl.ACC) puzzles the news came in
'The man that the news puzzles came in.'
(Anagnostopoulou 1999, (31c))

The inherent case proposal provides a straightforward explanation of these facts. Relativization involves empty operator movement, which leaves a gap behind. Resumptive pronouns surface in contexts where a gap is disallowed. P-stranding, in Greek, is such a context. The fact that resumptive clitics are obligatory with both normal dative arguments and accusative experiencers supports the treatment of the latter as PPs.[5]

Interestingly, both effects are limited to the nonagentive use of psych verbs. Thus, (56a), where the accusative experiencer is not clitic doubled, *must* be interpreted agentively; and the agentive reading of (56b), prompted by the rationale clause, obviates the need for a resumptive pronoun in the relative clause.

(56) a. I Maria enohli ton Petro.
the Mary bothers the Peter
'Mary bothers Peter.'

b. O anthropos pu eknevrise i Maria aplos ja
the man that irritated-3sg. the Mary.ACC simply in-order

na dhi tis antidhrasis tu apodhihtike poli anektikos.
SUBJ see the reactions his proved.3sg very tolerant
'The man that Mary irritated just to see his reactions proved to be very tolerant.'
(Anagnostopoulou 1999, (32), (35))

This corroborates the conclusion that the agentive/nonagentive contrast is represented in the grammar; psych effects are only found in the nonagentive variants.

3.4 English

Roberts (1991) and Johnson (1992) observed that Belletti and Rizzi's extraction contrast can be replicated in English.

(57) a. *Which film was Dirk amusing to the director of?
b. Which film did Sam entrust Marilyn to the director of?
(Roberts 1991, (43a,c))
c. ??Who did your behavior bother the sister of?
d. Who did you tease the sister of?
(Johnson 1992, (24))

The experiencer displays islandhood as an object of a nonagentive psych predicate but not as an object of an agentive verb. Notice that the violation in English is milder, since prepositional objects in this language are not strong islands (e.g., ??*Who did you agree with the sister of?*).

Stowell (1986) pointed out that extraction of the experiencer object from a *wh*-island incurs a strong violation, on a par with subject extraction.

(58) a. *Who$_1$ did you ask me why these things bothered t$_1$?
b. *What$_1$ did you ask me why t$_1$ bothered me?
(Stowell 1986, (25a, 26a))

Although the status of (58a) is quite bad, it is not clear that it is as bad as (58b). Johnson (1992) also notes that experiencer objects are more resistant to extraction from *wh*-islands than other direct objects:

(59) a. ??Who did you wonder whether Sam knew?
b. ?*Who did you wonder whether the book bothered?
(Johnson 1992, (25a), (26a))

It is Johnson's suggestion that object experiencers behave like adjuncts in this regard. However, it seems that the ill-formedness of (59b), though

greater than that of (59a), is not as severe as that of standard adjunct extraction out of a *wh*-island (60a). In fact, it seems to have just the intermediate status of PP-extraction (60b).

(60) a. *Why$_1$ did you wonder whether the book appealed to Sam t$_1$?
b. ?*To whom did you wonder whether the book appealed t$_1$?
c. ??Who$_1$ did you wonder whether the book appealed to t$_1$?

If those (admittedly subtle) distinctions are representative, we have evidence that English too treats accusative experiencers as PPs in certain contexts.

An independent argument to the same effect comes from restrictions on the formation of synthetic compounds. Grimshaw (1990, 15) observed that the object of class I verbs can occur as the nonhead of a such a compound (61a), but that of class II verbs cannot (61b).

(61) a. a god-fearing man, a fun-loving teenager
b. *a man-frightening god, *a parent-appalling exploit

Grimshaw maintained that (i) the argument in the compound must be thematically lower than the argument left outside; and (ii) the nonexperiencer argument in both classes I and II is a theme, which is thematically lower than the experiencer. However, (ii) is no longer tenable, as more recent research has established a distinction between "theme" and "causer" (see Pesetsky 1995). Moreover, the assumption that the goal is higher than the theme, invoked by Grimshaw to explain (62a), is contentious.

(62) a. gift-giving to children/*child-giving of gifts
b. *child-reading, *spy-telling
c. *charity-depending, *stranger-confiding

Baker (1997) noted that (i) cannot explain why goal-compounds are impossible even in the absence of (the optional) theme, as in (62b). He suggests that the true generalization underlying these facts is quite simple: Prepositions cannot occur inside compounds. Thus, whether an argument requires an overt preposition (62c) or a null one, as the goal in double object verbs (62a,b), it is excluded from compounds. Baker points out that this explanation naturally extends to (61b) on the crucial assumption that object experiencers are introduced by a (dative-like) null preposition. This assumption concurs perfectly with the analysis presented here.

A final peculiarity of object experiencers in English, noted by a reviewer, is their resistance to Heavy NP Shift (HNPS), parallel to the inner object in double object constructions (63a,b).

(63) a. *These things bothered yesterday the man who visited Sally.
b. *We told these things (yesterday) the man who visited Sally.
c. These things appealed yesterday to the man who visited Sally.

As is well known, the inner object in double object constructions has been independently argued to be introduced by a null P (Czepluch 1982; Kayne 1984; den Dikken 1995; Baker 1997). Moreover, HNPS appears to be a stylistic PF rule. It is tempting to suggest that as a PF rule, it can only apply to phrases headed by a phonologically visible head (Landau 2007). Thus, accusative experiencers and inner objects, headed by null prepositions, are invisible to HNPS, whereas overtly prepositional experiencers, as in (63c), are perfectly shiftable.

3.5 Hebrew

The Greek relativization contrast in (54) (55) shows up in Hebrew as well.[6] In standard direct object relativization, either a gap or a resumptive pronoun is possible (64a) (the former being more natural); all other objects dative and oblique require a resumptive *pro* (64b) (doubled by an agreeing morpheme on the stranded preposition):

(64) a. ha-iš$_1$ še-Rina hikira (?oto$_1$) higia.
the-man the-Rina knew (?him) arrived
'The man that Rina knew has arrived.'
b. ha-iš$_1$ še-Rina xašva al-*(av$_1$ *pro*$_1$) higia.
the-man that-Rina thought of-*(him) arrived
'The man that Rina thought of has arrived.'

The accusative pronoun becomes obligatory when resuming a relativized object experiencer in a nonagentive context (65a); predictably, agentivity restores the normal pattern (65b).

(65) a. ha-muamadim še-ha-toca'ot hiftiu *(otam) lo amru mila.
the-candidates that-the-results surprised *(them) not said word
'The candidates that the results surprised did not utter a word.'
b. ha-muamadim še-ha-itonay hiftia (otam) lo
the-candidates that-the-journalist surprised (them) not
amru mila.
said word
'The candidates that the journalist surprised did not utter a word.'

This is typical of inherent accusative case. Double accusative verbs bring this out very clearly, as one of their objects bears structural accusative

and the other one inherent accusative. The verb *limed* 'teach' requires resumption of the goal argument but not of the theme:[7]

(66) a. limadti et ha-yeladim et ha-šir.
I-taught ACC the-children ACC the-song
'I taught the children the song.'
b. ha-šir še-limadti et ha-yeladim (?oto) haya arox.
the-song that-I-taught ACC the-children (?it) was long
'The song I taught the children was long.'
c. ha-yeladim še-limadti *(otam) et ha-šir hayu
the-children that-I-taught *(them) ACC the-song were
xasrey-savlanut
lacking-patience
'The children I taught the song to were impatient.'

The English contrast in *wh*-island violations (59) is also reproducible in Hebrew. In an agentive context, extraction of the object of *hitrid* 'bother' is distinctly better than the same extraction in a nonagentive context.

(67) a. ?Eyze šxenim lo yadata im Rina hitrida?
which neighbors not know-2sg.M whether Rina bothered
'Which neighbors didn't you know whether Rina bothered?'
b. ?*Eyze šxenim lo yadata im ha-ašpa
which neighbors not know-2sg.M whether the-garbage
hitrida?
bothered
'Which neighbors didn't you know whether the garbage
bothered?'

These facts establish that accusative experiencers in Hebrew are underlyingly oblique.

3.6 Romance Reflexives

B&R observed that nonagentive class II verbs do not reflexivize with the clitic *si*.

(68) a. *Gianni si preoccupa.
Gianni *si* worries
'Gianni worries himself.'
b. *Io mi interesso.
I *mi* interest
'I interest myself.'

Arad (2000) notes that reflexivization is possible when the psych verb is used agentively.

(69) Gli studenti si spaventano prima degli esami per indursi a
The students *si* frighten before the exams to urge-*si* to
studiare di più.
study more
'The students frighten themselves before exams in order to urge themselves to study harder.'
(Arad 2000, (9b))

Following Rizzi (1986), B&R took this to be an unaccusative diagnostic: Only verbs with external arguments reflexivize. This follows from the Chain Condition of Rizzi (1986) (coupled with the θ-criterion), which rules out NP-movement across an argument (here, the reflexive clitic) coindexed with the NP. Hence, the ungrammaticality of (68) was seen as an argument for the unaccusative analysis of psych verbs.

The first problem with this analysis was noted by Grimshaw (1990, 155), who observed that B&R have no satisfactory account of the fact that the binding violation with a full reflexive is milder.

(70) a. *?Gianni preoccupa se stesso.
Gianni worries himself
'Gianni worries himself.'
b. ?Politicians depress/worry each other.

For B&R, (68) and (70) are structurally equivalent. To account for the acceptability contrast, they invoke focus, claiming that the full reflexive (unlike the clitic) can be stressed and hence be assigned a referential index after the Chain Condition applies. However, it seems that examples like (70) have a different flavor than examples like (68) even without focal stress on the anaphor. In section 8.4 I return to these cases and show that whereas reflexive-clitic violations occur with *all* class II verbs, full-reflexive violations occur only with *stative* ones.

Grimshaw herself accounted for the ill-formedness of (68) by reference to the argument structure of class II verbs. In her system, these verbs lack an external argument (which is defined as the most prominent argument both thematically and aspectually). *Si*-reflexivization is a lexical operation that binds the external argument to an internal one, thus reducing by one the valency of the base verb. Because class II verbs lack an external argument, they cannot undergo this operation.

There is much to be said about Grimshaw's analysis, which assigns an unaccusative derivation to reflexive verbs (see the critique in Reinhart

1997, 2000; Reinhart and Siloni 2004). However, there is reason to believe that both B&R's and Grimshaw's accounts are flawed in a more fundamental sense. Notice that B&R's examples are drawn exclusively from class II verbs. It turns out that class III verbs do allow reflexive *si*, even on their nonagentive use, as Arad (1998) pointed out:

(71) a. Gianni si piace.
Gianni *si* appeal
'Gianni likes himself.'
b. Abbiamo insegnato ai bambini a piacersi.
have taught to-the children to appeal-*si*
'We taught the children to like themselves / think highly of themselves.'

And in fact, the same class II/class III contrast exists in French as well:[8]

(72) *Class II*
a. *Jean se préoccupe.
John himself worries
b. *Jean se frappe par son intelligence.
John himself strikes by his intelligence
(Bouchard 1992, (6b), (22a))

Class III
c. Jean se suffit.
'John suffices to himself.'
d. Je me plais avec les cheveux longs.
'I like myself with long hair.'
(Legendre 1989, n. 18)

Both B&R and Grimshaw assumed that reflexive *si* is found only with verbs that select an external argument. Yet class III verbs are uncontroversially unaccusative: They select the *be* auxiliary, do not passivize, allow word-order alternations that are typical of unaccusatives, and so on (Perlmutter 1984; Legendre 1989; Mulder 1992; Pesetsky 1995). The fact that they reflexivize with *si* falsifies the generalization that links this process to external arguments, thereby calling for an alternative account.

Arad (1998) maintains that an "operational" reformulation of Burzio's generalization can explain the reflexivization facts. According to this reformulation, "if you do something to the accusative case, you should also do something to the external argument" (248). Reflexivization absorbs accusative case; hence the argument marked by *si* must be the external one. Class II verbs violate this requirement because they lack an

external argument. Class III verbs are exempt from it as they do not assign accusative case. The account is revised by Arad (2000), where class II and III verbs are no longer treated as unaccusatives. Instead, it is claimed that the accusative case in class II is inherent, whereas the dative case in class III is structural. Transitivity is defined as the cooccurrence of an external argument with structural case; hence class III but not class II verbs are transitive. Finally, reflexivization and causativization are said to apply only to transitive verbs, explaining the (68)/(71) contrast.

It is unclear whether the assumptions incorporated into this account can be motivated independently (e.g., structural dative case is thematically restricted to experiencers; transitivity divorced from accusative case). At any rate, I would argue that Arad's observation concerning the contrast between class II and class III reflexivization can be readily explained within the present system.

Suppose that reflexive verbs are syntactically unergative, formed by a reduction operation (Reinhart 1997, 2000, 2001, 2002; Reinhart and Siloni 2004). Reduction identifies two θ-roles of a verb (thus reducing its arity), so that only one of them projects to the syntax, and absorbs one of the verb's case features (accusative or dative). In reflexive (as opposed to unaccusative) reduction it is the external argument that is projected; hence the unergative syntax. Reinhart assumes, following Grimshaw, that one of the θ-roles involved in reduction must be external, but we have already seen that class III reflexivization forces one to weaken this condition.

Given these assumptions, the possibility of reduction depends, inter alia, on the possibility of absorbing verbal case. Now, it is independently known that the reflexive clitic *si*/*se* is subject to the following restriction.

(73) Reflexive *si*/*se* may absorb accusative or dative case, but not oblique case.

(73) is a morphosyntactic property of reflexive clitics. If oblique arguments are introduced by a preposition, as suggested above, then perhaps this property can be restated in categorial terms: Reflexive *si*/*se* may absorb nominal but not prepositional case. The validity of this restatement depends on the treatment of the dative marker *à*: Is it a case marker or a genuine preposition? In the former case, datives will be bare DPs, and a categorial distinction is available between accusatives/datives and obliques. In the latter case, no such distinction exists, and (73) would remain a morphological generalization, true but unrelated to category labels. As the categorial status of *à* is contentious, I would like to remain

neutral on this choice and simply assume that (73) is a correct descriptive generalization, whether reducible or not.

The generalization (73) accounts for representative paradigms like the following (French data due to M. A. Friedemann).

(74) *Accusative se*
a. Il s'est accusé (lui-même).
he *se*-is accused (himself)
'He accused himself.'

Dative se
b. Il s'est acheté une voiture (à lui-même).
he *se*-is bought a car (to himself)
'He bought himself a car.'

(75) *Oblique se*
a. Il a parlé de lui-même.
he has talked of himself
'He talked about himself.'
b. *Il s'est parlé (de lui-même).
he *se*-is talked (of himself)
'He talked about himself.'

(76) a. Il compte sur lui-même.
he counts on himself
'He counts on himself.'
b. *Il se compte (sur lui-même).
he *se* counts (on himself)
'He counts on himself.'

I suggest that inherent accusative case is truly oblique and hence cannot be absorbed by the reflexive clitic. The impossibility of reflexive class II verbs follows with no further assumptions. As for class III verbs, since it is the dative case that is absorbed, reflexivization is fine.

How would these facts be explained in Reinhart's system, which does not assume inherent case? For Reinhart (2002), reduction of the experiencer argument is impossible since reduction can only apply to "causative" arguments (specified [+c]) unspecified for mental state ([+m]). Since experiencers are specified for [+m], they cannot be reduced. This means that reduction of class II verbs can only be what she calls "expletivization," reducing the external cause argument, and not of the reflexive type, reducing the internal argument. Reflexive interpretation of (68)/(72a,b) is correctly ruled out (but not incohative interpretation; indeed,

B&R [1988, n. 2] note that *si preoccupare* has an incohative use). However, the same constraint would incorrectly block reduction of the experiencer in class III, which lacks any [+c] argument in Reinhart's system, rendering (71)/(72c,d) nonderivable. It appears that the case restriction on reduction is empirically superior to the semantic restriction.[9,10]

Although class II verbs cannot be reflexivized, in chapter 4 we will see that they can be passivized in certain languages. One might wonder why the same oblique case that cannot be absorbed by the reflexive clitic can be absorbed by the passive morphology. There is a principled explanation for this asymmetry. In chapter 4 I argue that oblique arguments can be passivized using two strategies: P-stranding ("pseudo-passive") or quirky passive. The first strategy, available in several Germanic languages, reanalyzes the preposition that introduces the object with the verb (e.g., *John was depended on*). The second strategy, available in langauges like Finnish and Icelandic, pied-pipes the preposition along with the object to the subject position. Languages of the Romance family lack both strategies and hence do not passivize oblique arguments. Consequently, Romance reflexivization cannot absorb oblique case, and class II reflexives are ruled out.

3.7 Romance Causatives

One of the arguments put forward by Belletti and Rizzi (1988) in favor of the unaccusative analysis of class II rests on a test developed by Burzio (1986). Burzio argued that clauses with derived subjects cannot be embedded as infinitival complements of the causative verb *fare*. This provides an unaccusative test for Italian, and indeed, B&R illustrate that class II verbs (77a) pattern with unaccusatives, as opposed to SubjExp verbs (77b), which display the normal transitive behavior.

(77) a. *Questo lo ha fatto preoccupare/commuovere/attrarre
this him has made worry/move/attract
ancora più a Mario.
even more to Mario
'This made Mario worry/move/attract him even more.'

b. Questo lo ha fatto apprezzare/temere/ammirare ancora
this him has made estimate/fear/admire even
più a Mario.
more to Mario
'This made Mario estimate/fear/admire him even more.'

Although unmentioned by B&R, the effect disappears, as expected, in agentive contexts, where class II verbs restore normal behavior. This has been noted by Arad (1998).

(78) Gli ho fatto spaventare il candidato per farlo lavorare di più.
'I made him frighten the candidate$_1$ to make him$_1$ work harder.'
(Arad 1998, 189, (16))

Prima facie, this looks like a nice consequence of B&R's theory. Moreover, similar facts obtain in French: Neither class II (79) nor class III verbs (80) can be embedded in causative constructions (Kayne 1975, 253, notes that the restriction is lifted in agentive contexts).

(79) a. *Son bruit déplaisant fait dégoûter Jean à la télévision.
its noise unpleasant makes disgust John to the television
'Its unpleasant noise makes television disgust John.'
(Kayne 1975, 252, (144a))
b. *Cette blague faisait amuser les enfants aux marionnettes.
this joke made amuse the children to-the marionettes
'This joke made the marionettes amuse the children.'
(Herschensohn 1992, (12c))
c. *Ça fera intéresser Pierre à la linguistique.
this will-make interest Peter to the linguistics
'This will make linguistics interest Peter.'
(Legendre 1993, (8b))

(80) a. *Sa nouvelle coiffure la fera plaire à Pierre.
her new hairdo her will-make appeal to Peter
'Her new hairdo will make her attractive to Peter.'
(Legendre 1993, (33b))
b. *Cette chanson faisait manquer la statue à Marie.
this song made miss the statue to Mary
'This song made Mary miss the statue.'
(Herschensohn 1992, (12b))

Nevertheless, close consideration of Romance causatives suggests that the correct explanation for the ungrammaticality of these sentences is unrelated to unaccusativity.

First, as mentioned above, there is strong evidence that class II verbs are not unaccusative, and hence are not amenable to Burzio's analysis. On too many points for example, auxiliary selection, passivization, lexical operations referring to external arguments, compatibility with pure

expletives (e.g., *il* vs. *cela* in French) class II verbs do not pattern with unaccusatives, their subject (a causer rather than a theme) behaving like a normal external argument (see Campbell and Martin 1989; Zaring 1994; Pesetsky 1995; Iwata 1995; Cançado and Franchi 1999; Reinhart 2001).

But even if class II verbs were unaccusative, it is hard to see how that analysis (on which B&R rely) could be maintained in its original form. Burzio assumed that causative complements that assign dative case to the external argument so-called *FI causatives* are full clausal projections (as opposed to *FP causatives*, which are bare VPs). The embedded VP undergoes leftward movement past the subject, giving rise to the VOS word order. If the subject is derived, as with passive and unaccusative verbs, the unbound trace in the fronted VP yields ungrammaticality (irrepairable by reconstruction).

However, subsequent work (e.g., Guasti 1996, 1997) has established that the causative complement is in fact subclausal, lacking all functional projections where Aux/Neg/Tense are licensed. The embedded verb forms a complex predicate with the causative verb (possibly via incorporation). Under current assumptions, it is plausible to assume that FI causatives are vP projections whereas FP causatives are VP projections; the difference boils down to the inclusion or exclusion of the external argument. Since unaccusative verbs do not project the vP level, they will only occur in the FP causative. Yet nothing in principle should block the assignment of dative case to the Theme argument in an FP causative, if that argument is internal, as B&R assumed. In other words, robbed of the assumption that the dative DP occupies a subject position (Spec of IP), B&R cannot derive the failure of class II causatives even on the unaccusative analysis.

This leaves us with no obvious solution to the ungrammaticality of (77a) and (79). The present analysis, I argue, combined with independently known properties of Romance causatives, provides a straightforward solution to the puzzle.

In Romance as in many other languages, nominative case is withheld from the subject of the small clause embedded under the causative verb (the causee). Instead, the causee gets some structural case from the matrix causative verb, the identity of that case varying across languages and construction types. In Romance causatives, the case assigned to the embedded subject depends crucially on the transitivity of the embedded verb: The causee is assigned dative case if the embedded object "uses

up" the accusative case; otherwise with intransitive verbs the accusative case goes to the causee.

A simple way of understanding this is the following. The light v heading a causative complement in Romance is case-defective, lacking the [acc] feature. Thus, any embedded argument without inherent case (assigned internally to the vP complement) must be externally case-licensed by the causative verb. The hierarchy of functional projections enveloping this verb dictates that structural accusative must be checked before (and below) structural dative. Thus, the causee the highest embedded argument will be assigned accusative only if no internal argument needs case; otherwise, the causee will be assigned the second, dative case.

In principle, there are four logical possibilities of distributing case in class II causatives:

(81) *Class II causatives*

a. $*V_{Caus} \xrightarrow{ACC}$ Theme, $Experiencer_{[ACC]}$

b. $*V_{Caus} \xrightarrow{DAT}$ Theme, $Experiencer_{[ACC]}$

c. $*V_{Caus} \xrightarrow{DAT}$ Theme, $Experiencer_{[ACC]}$
   ACC

d. $*V_{Caus} \xrightarrow{ACC}$ Theme, $Experiencer_{[ACC]}$
   DAT

Option (81a) surfaces with two accusative arguments. I will assume that aside from rare exceptions, double accusatives are morphologically ill formed; at the least, productive syntactic processes (unlike lexical ones) may not produce double accusatives. Option (81b) violates the case-assignment sequence; dative may not be discharged before accusative is. Options (81c,d) involve suppression of the inherent case on the experiencer, in favor of external structural case. This is also excluded on general grounds (see (42b)).

Thus, there is no grammatical derivation for class II causatives that satisfies the case properties of both class II verbs and the causative construction. This result is obtained without any ad hoc assumptions, and it relies crucially on the idea that object experiencers are oblique.[11]

Turning to class III verbs, we expect them to occur in grammatical derivations parallel to (81a). The experiencer would retain its dative case and the theme would be assigned the first case, accusative, by the causative verb.

(82) *Class III causatives*

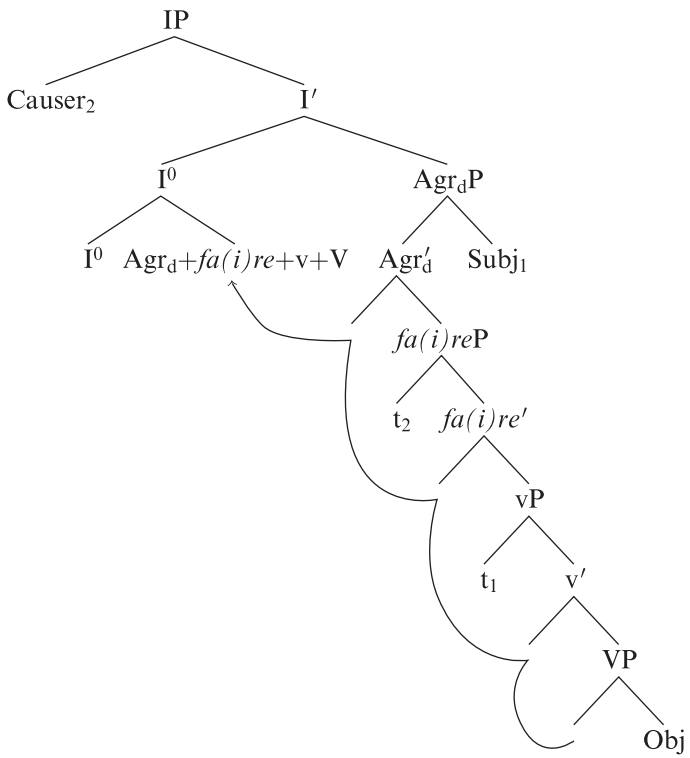
$V_{Caus} \xrightarrow{ACC}$ Theme, $Experiencer_{[DAT]}$

In fact, however, these structures are ungrammatical in French (see (80)). The question, then, is this: Why is a dative experiencer not licensed in a causative complement, whereas a dative goal is?

(83) a. *Ça a fait plaire Marie à Pierre.
this has made to-appeal Mary to Peter
'This made Mary attractive to Peter.'
b. Ça a fait parler Marie à Pierre.
this has made to-talk Mary to Peter
'This made Mary talk to Peter.'

To answer this question, we must make some assumptions about the structure of the causative complement. Although this is a topic of much debate (see Rouveret and Vergnaud 1980; Burzio 1986; Guasti 1996; Kayne 2004), the following three observations are generally accepted: (i) A dative embedded subject is "misplaced" (following instead of preceding its VP); (ii) it is thematically dependent on the embedded verb; (iii) it is case-licensed by the matrix causative verb. Following Chomsky's (2004) thesis that θ- and (structural) case-positions are divorced (the former involving Merge, the latter Move), the natural conclusion from (i) (iii) is that the dative embedded subject occupies a *derived* position. Given the evidence that the causative complement is a bare VP/vP lacking any high functional layers (Guasti 1996, 1997), we must conclude with Kayne (2004) that the landing site of the embedded subject is a matrix position, where dative case is licensed (say, in Agr_dP projection). This ECM-like derivation is outlined in (84) for a normal transitive verb. Notice that the label 'Subj' serves only to identify the causee, carrying no further "subjecthood" implications. Following Guasti (1996), I assume obligatory incorporation of the embedded verb to the causative verb; the object checks accusative case covertly at [Spec,*fa(i)re*P].

(84)



If one is reluctant to posit a right-hand specifier for Agr_dP, additional reordering is needed in order to derive the surface final position of the dative subject (such as VP-fronting, as in Burzio 1986; Kayne 2004). I follow Guasti (1997) in assuming the former option, which allows one to transparently express the connection between the surface position of the embedded subject and its case licensing.[12]

Suppose that V in (84) is a class III verb; being unaccusative, it projects a VP with no vP layer. The (noncauser) theme is projected as the complement of V, and the experiencer, higher on the thematic hierarchy, is projected as its specifier (see (113) below). Crucially, [Spec,VP] is on the left; the right-hand [Spec,Agr_dP] is an exception in Romance phrase structure. We may assume that the obligatory incorporation of V to *fa(i)re* requires linear adjacency, perhaps for prosodic reasons. The experiencer in [Spec,VP] breaks this adjacency and thus blocks incorporation. By contrast, the dative goal in (83b) is projected as a right-hand sister to V, not interfering with incorporation. The contrast is illustrated in (85a b).

(85) a. *[$_{fP}$ *fa(i)re* [$_{VP}$ Exp [$_{V'}$ V Theme]]]
b. [$_{AGRdP}$ Agr_d [$_{fP}$ *fa(i)re* [$_{vP}$ t_{Agent} [$_{v'}$ v [$_{VP}$ V Goal]]]] Agent]
c. [$_{AGRdP}$ Agr_d [$_{fP}$ *fa(i)re* [$_{vP}$ t_{Exp} [$_{V'}$ V Theme]]] Exp]

Notice that *fa(i)re*-v-V adjacency is guaranteed in (85b) by raising of the embedded external argument to [Spec,Agr_dP], a case-driven operation that leaves a caseless trace in [Spec,vP]. It is well known that traces block contraction only in case positions (e.g., *wanna*-contraction); assume the same for incorporation. This explains why (85a) is not saved even if [Spec,VP] is vacated by *wh*-movement or cliticization (independently, Kayne [1975] and Burzio [1986] observed a general ban on dative cliticization in the presence of an accusative argument in these causative contexts). In fact, the only way to redeem (85a) is to embed it in an Agr_dP layer and raise the experiencer to its specifier, as in (85c). When will this option materialize?

Recall that the experiencer bears inherent dative case, while Agr_d checks structural dative case on its specifier. On economy assumptions, the experiencer can raise only if it bears an additional structural case feature to be checked at Agr_dP; in other words, only if it is a *quirky* dative (McGinnis 1998; Chomsky 2000, 2001). However, it is an independent fact that unlike Italian (86), French does not allow quirky dative experiencers (87).

(86) a. A Gianni è sempre piaciuta la musica.
to Gianni is always pleased the music
'Music always pleased Gianni.'
b. La musica è sempre piaciuta a Gianni.

(87) a. *A Marie plaît cette musique.
to Mary pleases this music
'This music pleases Mary.'
b. Cette musique plaît à Marie.

Preverbal datives in French are always dislocated (as topic or focus) and cannot switch with the nominative DP. This means that French does not license quirky DPs with both inherent dative and structural case. We may assume that the same restriction against a quirky dative subject in (87a) is at work in (80) and (83a), banning a quirky "indirect object" of *faire*. The latter can be derived only by some extraneous reordering, which is not freely available.

An immediate expectation is that Italian *will* license causatives of class III verbs, since dative experiencers *are* licensed as quirky subjects in this

language (86a). B&R, who established the latter fact, did not test this prediction. Arad (1998, 2000) did, arguing that class III verbs in Italian are possible under causatives, unlike class II verbs:

(88) Gianni ci ha fatto piacere il gelato.
'Gianni made us like ice cream.'

Arad (2000) relates the asymmetry in causativization to "transitivity," defined in such a way so as to be a property of class III but not of class II. As mentioned in the discussion of *si*-reflexives, this notion is not independently motivated. Moreover, Arad's account would incorrectly predict French to be equally tolerant to class III causatives.

In fact, it is not clear that this represents a uniform judgment (G. Cinque [pers. comm.] finds (88) ungrammatical). The few class III verbs in Italian exhibit variable behavior in the causative construction (L. Brunetti, M. T. Guasti, pers. comm.).

(89) a. Gianni ha fatto mancare il vino a tutti, alla
Gianni has made miss/lack the wine to everybody, at
sua festa.
his party
'Gianni has made everybody miss wine at the party.'

b. ??Paolo ha fatto dispiacere a tutti di aver votato X.
Paolo has made dislike to everybody to have voted X.
'Paolo made everybody dislike voting X.'

c. ?*Abbiamo fatto bastare la torta a tutti gli invitati, alla
have.1pl made be-enough the cake to all the guests, at
festa.
the party
'We made the cake suffice to all the guests at the party.'

d. *Gianni ha fatto seccare a Maria di andare a Roma.
Gianni has made bother to Mary to go to Rome
'Gianni made going to Rome bother Mary.'

Possibly, this variation reflects the fact that [Spec,Agr_dP] in Italian is not as "hospitable" as [Spec,IP] is to quirky arguments; the ability to check structural case on a DP with inherent case is a property that can vary across specific functional heads and dialects. Still, the fact that at least some class III verbs, for some Italian speakers, may occur grammatically in causatives is explained naturally in our system by the option of quirky datives. This saves these examples from the fate of class II causatives (quirky accusatives do not exist in Italian). The same option is unavailable in French, explaining the (apparently uncontroversial) status of (80).

To conclude, I have shown that the single thesis in (40), interacting with independent principles of grammar, some universal and others parametric, accounts for a fairly intricate pattern of facts in Romance psych constructions: The lack of *si*/*se*-reflexives in class II but not in class III (both Italian and French), the lack of class II causatives (both Italian and French), and the lack of class III causatives (French and some Italian verbs/dialects). This has been achieved with minimal violence to the grammar. Alternative analyses both fail to take into account the entire set of facts and rest on dubious assumptions (the unaccusative status of class II, "transitivity" of class III).

4 Passive

The issue of whether class II verbs have a verbal passive has generated much controversy in the literature on psych verbs. One camp holds that class II verbs lack an external argument and therefore cannot form verbal passives (Belletti and Rizzi 1988; Legendre 1989, 1993; Grimshaw 1990; Roberts 1991; Herschensohn 1992, 1999), while the other camp holds that class II verbs are normal transitives and do form verbal passives (Mulder 1992; Legendre and Akimova 1993; Slabakova 1994; Pesetsky 1995; Bouchard 1995; Iwata 1995; Tenny 1998; Pylkkänen 2000). Part of the reason for this disagreement is the unfortunate fact that in many languages, passive participles are ambiguous between a verbal and an adjectival form. Thus the evidence bearing on the debate is often indirect, consisting of tests that are supposed to distinguish the two uses. Those tests themselves are not clear cut, adding to the overall confusion.

In fact, I think there is even a deeper reason for this confusion, namely, both camps are in a sense right. A careful consideration of the available evidence suggests that there are two types of languages.

(90) *Psych Passives*
Type A Languages: Only eventive (nonstative) Class II verbs have verbal passive (English, Dutch, Finnish).
Type B Languages: Class II verbs have no verbal passive (Italian, French, Hebrew).

In section 4.1, I discuss type A languages and argue that the only relevant constraint in them is the (universal) ban on passivization of unaccusatives. It turns out that stative class II verbs (like all class III verbs) are unaccusative, a generalization that is established and derived in section 4.2. In section 4.3 I turn to type B languages, where passive uniformly cannot apply to DPs with inherent case (a parametric property).

Let us see now whether the distinction between type A and type B languages can be related to independent parameters. Putting aside stative verbs, we may pose the question: What does it take to be a type A language? In other words, what grammatical strategies can be exploited to allow passivization of quirky objects? In principle, there are two possibilities.

(91) *Strategies for Passivization of Quirky Objects*
   a. *P-stranding*: The preposition that governs the object is stranded and reanalysed with the verb.
   Pseudopassive: $[_{TP}\ [_{DP}\ Exp]_1\ [_{T'}\ Aux\ [_{VP}\ [_{V}\ V_{PASS} + \emptyset_{\psi}][_{DP}\ t_1]]]]$
   b. *Pied-Piping*: The preposition that governs the object is carried along to the subject position.
   Quirky passive: $[_{TP}\ [_{PP}\ \emptyset_{\psi}\ [_{DP}\ Exp]]_1\ [_{T'}\ Aux\ [_{VP}\ V_{PASS}\ [_{PP}\ t_1]]]]$

It is important to realize that both options are parametric: (91a) will only be available in languages where [V+P] reanalysis can feed A-movement; essentially, these are languages that license pseudo-passives.[1] (91b) will only be available in languages licensing quirky subjects. Both options will give rise to type A languages, where verbal psych passives are attested.

In fact, I argue that both options exist. English and Dutch are type A languages in virtue of strategy (91a); both languages allow pseudo-passives, although in Dutch it is restricted to impersonal passives.

(92) a. This bed was slept in.
   b. Mary can be relied on.

(93) a. Daar werd over gepraat.
   'There was talked about.'
   b. Daar werd in geslapen.
   'There was slept in.'
   (J. Schaeffer, pers. comm.)

The third type A language to be discussed here, Finnish, exemplifies strategy (91b), where inherent case (below, elative) is retained under passive.

(94) a. Pidän sinu-sta.
   like.1sg you.ELA
   'I like you.'
   b. Sinu-sta pidetään.
   you.ELA like.PASS
   'You are liked.'
   (L. Pylkkänen, pers. comm.)

Thus, the hypothesis that accusative experiencers bear inherent case, coupled with the independently known strategies in (91), yields an extremely nontrivial crosslinguistic prediction:

(95) Verbal passives of nonagentive ObjExp verbs will be available only in languages allowing either pseudo-passives or (oblique) quirky passives.

Clearly, (dis)confirmation of this prediction is a matter for much research. Yet the sample of six languages examined below does split nicely into type A and type B languages, in conformity with our prediction. We first discuss type A languages.

4.1 Type A Languages: No Stative Psych Passives

When one examines the range of possible psych passives in type A languages, a generalization emerges: Only nonstative psych verbs passivize. This is particularly interesting since in the languages to be discussed there is no general constraint against stative verbal passives; only stative verbal *psych* passives (of class II) are excluded. The best solution to this puzzle is the most general solution, namely, these verbs do not passivize because they lack an external argument. Thus, the generalization in (96a) should reduce to the one in (96b).

(96) a. Universally, stative class II verbs do not passivize.
b. Universally, stative class II verbs are unaccusative.

Sections 4.1.1 4.1.3 illustrate (96a) with three languages; section 4.2 derives (96b) from general principles regulating the lexicon-syntax mapping.

4.1.1 English

Adopting B&R's claim that psych passives are always adjectival, Grimshaw (1990) noted the following contrast.

(97) a. The situation is depressing Mary.
b. *Mary is being depressed by the situation.
(Grimshaw 1990, 114, (13))

The progressive aspect in English is a standard test for nonstatives. Grimshaw's reasoning was as follows: The verb *depress* is not (or need not be) stative in the active, as it can appear in the progressive. Yet its passive form is stative and rejects the progressive. We know, independently, that verbal passivization does not change verbs from stative to nonstative or

the other way round. Therefore, the passive in (97b) must be adjectival (thus explaining its stativity).

In response, Pesetsky (1995) observes that class II verbs vary in the extent to which they exhibit stative behavior. Unlike *depress*, which is strongly stative, *scare, terrify, shock*, and *surprise* all admit an eventive reading that *is* preserved in the passive (98a). Pesetsky further argues that (97a) has a special ("judgmental") noniterative meaning that (for some reason) is unavailable with passives. This restriction applies to other statives, such as class I psych verbs (98b d):

(98) a. Sue was continually being scared by odd noises.
b. Harry is clearly fearing an outbreak of the flu.
c. *An outbreak of the flu is clearly being feared by Harry.
d. An outbreak of the flu is feared by Harry.
(Pesetsky 1995, (73a), (75e), (76e), (77e))

Moreover, psych passives in the progressive are incompatible with special prepositions, a clear indication of their verbal status (see (120) below). English thus has eventive verbal psych passives.

However, Pesetsky also noted that some class II verbs do not passivize at all (99a,b) and in that respect resemble class III verbs that never form pseudo-passives (99c e) (see also Perlmutter and Postal 1984).

(99) a. *We were escaped by Smith's name.
b. *Panini was eluded by the correct generalization.
c. *Mary wasn't appealed to by the play.
d. *John was mattered to by this.
e. *Mary was occurred to by the same idea.
(Pesetsky 1995, (153b), (154b), (155b), (156b), (157b))

Pesetsky's suggestion is that all these verbs are unaccusative, hence their resistance to passivization. Additional evidence for the unaccusativity of *escape* and *elude* comes from the fact that they do not form middles or *-er* nominals (the same is true of *concern* and *interest*).

(100) a. *Great ideas elude/escape/concern/interest easily.
b. *an eluder, *an escaper, *a concerner, *an interester

Crucially, these are all stative verbs. Avoiding the progressive test, which is problematic for reasons discussed above, notice that they fail the pseudocleft test (cf. the eventive class II verbs in (101b)).

(101) a. *What that solution did was escape/elude/concern Mary.
b. What that noise did was scare/surprise/startle Mary.

Thus, English supports the correlation stated in (96b) between stativity and unaccusativity in class II.[2]

Further evidence that eventiveness, rather than agentivity, is the relevant determinant of verbal psych passives is provided by the Pittsburghese dialect of English (Tenny 1998). In this dialect there is a construction that unambiguously selects for verbal passive participles. Tenny shows that the construction is compatible with eventive adverbials, progressive aspect, and idiom chunk passives, and incompatible with the adjectival *un*-passive.

(102) a. The dog needs scratched hard.
b. The car has been needing washed for a long time now.
c. Tabs need kept on the suspect.
d. *The house needs unpainted.

Crucially, Tenny observes that class II passives are generally accepted in this construction, even when explicitly nonagentive.

(103) Nobody needs angered/irritated/discouraged/dismayed by the truth.

The existence of these passives favors Pesetsky's view over Grimshaw's. Interestingly, Tenny also observes that the acceptability of class II passives is somewhat unstable across speakers and across different verbs. She notes that the verbs in (104) yield more degraded sentences.

(104) a. The actor needs fascinated by the play.
b. Young people shouldn't need depressed by life.
c. The local farmers need concerned by the worsening drought.

Tenny's interpretation of these facts is in full accordance with our thesis: "verbal passives are more felicitous the more eventive the verb. A complex of factors influences the degree of eventiveness, including not only agentivity but also volitionality, punctuality, and the affectedness of change of state in the experiencer. A loose gradient can be defined from the purely stative ascription of property to the most eventive verb type.... Individual speakers vary in how strict they are with this scale in making verbal passives" (1998, 595). We see, then, that English provides evidence from indpendent sources for the contingency of verbal passive on nonstativity in class II verbs.

4.1.2 Dutch

As in English, Dutch passive participles are ambiguous between a verbal and an adjectival use. Following den Besten (1989), Pesetsky (1995)

argues that psych passives undergo V-raising, a test distinguishing verbs from adjectives in Dutch. V-raising optionally inverts the order of the participle and the auxiliary (adjoining the former to the right of the latter).[3]

(105) a. dat hij gelachen heeft.
that he laughed has
'that he has laughed'
b. dat hij heeft gelachen.

(106) a. dat Jan de hele dag druk bezig is.
that John the whole day very busy is
'that John is very busy the whole day'
b. *dat Jan de hele dag druk is bezig.
(Pesetsky 1995, (84), (88))

Verb raising, not surprisingly, can only apply to verbs. Thus, it can apply to the verbal participle in (105b) but not to the adjective in (106b). Psych passives can undergo V-raising, confirming their verbal status.

(107) a. dat ik door het college geboeid werd.
that I by the classes fascinated became.
'that I got fascinated by the classes'
b. dat ik door het college werd geboeid.
(Pesetsky 1995, (100))

Nevertheless, Pesetsky reports that not all psych passives are of equal status; for example, *irriteeren* 'irritate' and *ergern* 'annoy' yield a question mark in (107). If the present proposal is correct, this marginality is related to stativity: Strongly stative psych verbs should resist verbal passivization because they are unaccusative.

This prediction is confirmed (judgments by J. Schaefffer and A. van Hout, pers. comm.). Consider the behavior of *intrigeren* 'intrigue' (the same judgments are reported for *interesseren* 'interest').

(108) a. dat musicals Jan intrigeren.
that musicals John intrigued
'that musicals intrigued John'
b. dat Jan door musicals geïntrigeerd was/*was geïntrigeerd.
that John by musicals intrigued was/*was intrigued
'that John was intrigued by musicals'

The passive of *intrigeren* cannot undergo V-raising, a clear indication of its adjectival status.

Crucially, V-raising is *not* generally excluded with stative verbal passives (unlike the case of the Italian auxiliary *venire* 'come', as Pesetsky 1995 shows); class I passives do raise:

(109) a. dat Jan musicals haatte.
that John musicals hated
'that John hated musicals'
b. dat musicals door Jan gehaat was/was gehaat.
that musicals by John hated become/become hated
'that musicals came to be hated by John'

Thus, stative class II verbs are distinct from both eventive class II verbs and stative class I verbs. Only the combination of an experiencer with inherent case *and* stativity yields an unaccusative verb, resisting passivization.

4.1.3 Finnish

Pylkkänen (2000) argues that the stative/eventive distinction in class II verbs is morphologically marked in Finnish, in two ways: (i) eventive class II verbs contain an incohative morpheme lacking from stative verbs; (ii) stative class II verbs mark their object with partitive case (as do all atelic verbs), whereas the object of eventive class II verbs is marked accusative:[4]

(110) a. Hyttyset inho-tta-vat Mikk-a.
mosquitos.NOM find-disgusting-CAUS-3pl Mikko.**PAR**
'Mosquitos disgust Mikko.'
b. Presidentti ikävy-sty-tti Jussi-n.
president.NOM boredom-**INCH**-CAUS.PAST Jussi.**ACC**
'The president caused Jussi to become bored.'
(Pylkkänen 2000, (1b), (43c))

Pylkkänen shows that those two types of verbs have different selectional properties, a fact she attributes to the presence of an external argument in the eventive type versus its absence in the stative type. The argument is fairly theory-internal; however, Pylkkänen also shows that the same assumption accounts for a contrast in passivization: Only the eventive type has a passive form (the *with*-phrase in (111b) is an event-modifier; Finish passive has no *by*-phrase).

(111) a. *Maija-a inho-te-taan.
Maija.PAR find-disgusting-CAUS-PASS
'Maija is disgusted.'

b. Kaisa pelä-sty-te-ttiin huonoilla uusilla.
Kaisa fright-INCH-CAUS-PASS.PAST with bad news
'Kaisa was frightened with bad news (by somebody).'
(Pylkkänen 2000, (50a), (52a))

This contrast confirms our generalization regarding type A languages: Passive in class II is found only with eventive verbs, while stative verbs are unaccusative. The Finnish data is even sharper than the English/Dutch data because the aspectual distinctions are morphologically marked, so the relevant judgments need not appeal to subtle semantic intuitions.

4.2 Deriving the Unaccusativity of Stative Class II/III Verbs

The assumption that stative class II verbs are unaccusative explains why they lack verbal passives. Moreover, in section 8.4 I argue that it also explains their failure to license forward binding of object anaphors. Those two properties seem to be universal. It is therefore highly desirable to derive the stative/psych-unaccusative correlation from principles of UG. In this section I outline the steps of this derivation. Although some of these steps are as yet underived generalizations, I believe that they are all empirically well established.

Recall that stative class II and III verbs select both an experiencer and a target/subject matter argument.

(112) a. Global warming preoccupies George.
b. *preoccupy*: ⟨EXP, T/SM⟩

Let us assume that mapping to the syntax is governed by the following thematic hierarchy.

(113) Causer ≫ Experiencer ≫ T/SM. (Pesetsky 1995, (166))

I take (113) to instantiate a segment of some universal thematic hierarchy, feeding a relativized version of the UTAH (Uniformity of Theta Assignment Hypothesis). That is, while the grammar may contain statements to the effect that specific θ-roles (or aspectual roles) are intrinsically external (or internal), the hierarchy in (113) (and its extensions) "fill in" whatever is left unspecified. In particular, the experiencer role may be internal or external, depending on the identity of other roles in its environment.

Normally, only two (adjacent) members of this hierarchy are simultaneously realized; this is the content of Pesetsky's (1995) T/SM restriction

(to be discussed in section 5.1). As discussed in chapter 1, I assume that the eventive interpretation of class II verbs is associated with the causer argument, and vice versa. Conversely, the stative interpretation and the T/SM argument are likewise associated. Thus, stative psych verbs realize experiencer and T/SM, and (113) requires the latter to project lower than the former. If one can show that the experiencer argument must be internal, the hierarchy in (113) would entail that the T/SM argument is internal too.[5]

The problem, then, narrows down to the following question: Why can't the experiencer of a stative class II/III verb (e.g., *preoccupy*) project externally, like the experiencer of a class I verb (e.g., *fear*)? It is here that we bring in the next universal generalization.

(114) Inherent case is assigned only to internal arguments.

Again, there might be different views on why (114) should be true, but there is little doubt that it is. It is well known that quirky subjects bearing inherent case in a canonical subject position are always derived, and hence are internal arguments (Zaenen, Maling, and Thráinsson 1985; Sigurðsson 1989, 1992). Within GB, there was a natural way of deriving (114). As B&R (1988) pointed out, inherent case is assigned (like a θ-role) under government by V, but V governs only internal arguments (the external one being governed by Infl). Within the minimalist program, where government is discarded, an alternative distinction exists between internal and external arguments: Only the latter are introduced by a functional light v. We may assume that only lexical V can assign inherent case; the only case feature on light v is structural accusative.[6]

The account is complete if we add in the claim in (40), defended at length above and repeated below (recall that we presently disregard agentive contexts):

(115) Universally, non-nominative experiencers bear inherent case.

From (114) and (115) it follows that in all class II and III verbs statives included the non-nominative experiencer is an internal argument. In the stative ones, the remaining T/SM argument must also be internal, given the hierarchy in (113). Consequently, stative class II and III verbs have no external argument. Q.E.D.[7]

Notice that most class II verbs are ambiguous, to varying degrees, between stative and eventive readings. Empirically, unaccusative behavior is exhibited only by those verbs (e.g., *concern, interest*) that are unambiguously stative. We may assume that only the latter verbs lack, in

their thematic grid, a causer argument (which is the source of eventive interpretation).

An anonymous reviewer raises the question of how to distinguish stative class I verbs, which project the experiencer externally (e.g., *hate*), from stative class II/III verbs, which project it internally (*concern, appeal*). Reinhart (2001), for example, classifies external experiencers as [+m] and internal ones as [−c,+m] or [−c]; however, the distinction is not supported independently by the semantics of these arguments.

In fact, it is not clear that a principled distinction could or should be drawn between these two types of experiencers. Verbs denoting nearly identical concepts map differently across languages (e.g., English *like* vs. Italian *piacere*). Strikingly, one can find class I class III alternations for the same verb in the same language, involving no change of meaning (at most, the distinction is in register).

(116) a. Mær dámar væl hasa bókina. (Faroese)
Me.DAT like well that book.ACC
b. Eg dámi væl hasa bókina.
I.NOM like well that book.ACC
'I like that book very much.'
(Barnes 1986, (89))

(117) a. xasera lo ha-nexišut ha-nexuca. (Hebrew)
miss him.DAT the-resolve the-necessary
b. hu xaser et ha-nexišut ha-nexuca.
he.NOM misses ACC the-resolve the-necessary
'He misses the necessary resolve.'

It is, of course, possible to insist that such pairs are semantically distinct to an extent justifying the projection of the experiencer internally in the (a) examples and externally in the (b) examples. However, such a claim finds no support in native intuitions. Alternatively, we may suppose that lexical entries of verbs specify whether and to which argument the verb assigns inherent case. An experiencer marked by this lexical diacritic will be mapped internally, due to (114). Otherwise, a class I configuration will emerge, with an external experiencer.

4.3 Type B Languages: No Verbal Psych Passives

4.3.1 Italian

B&R (1988) presented four arguments in favor of the adjectival status of psych passives. The first two arguments were: (i) Like adjectives, and

unlike verbal passives, psych passives cannot bear a clitic pronoun in reduced relatives; (ii) unlike verbal passives, psych passives are incompatible with the auxiliary *venire*, 'come'. However, Pesetsky (1995) showed that argument (i) rests on a problematic choice of clitics, which renders the argument uninformative; and argument (ii) diagnozes *stativity*, not adjectivehood.

However, B&R presented two additional pieces of evidence, which Pesetsky does not discuss. That evidence points quite clearly to the adjectival status of some psych passives in Italian.

First, some class II verbs do not have regular participial forms (118b), and instead have only irregular adjectival forms (118c).

(118) a. Le sue idee mi stufano/stancano/entusiasmano.
'His ideas tire/excite me.'
b. *Sono stufato/stancato/entusiasmato dalle sue idee.
'I am tired/excited by his ideas.' [participial form]
c. Sono stufo/stanco/entusiasta dalle sue idee.
'I am tired/excited by his ideas.' [adjectival form]
(B&R 1988, (55) (56))

B&R interpret this as a consequence of the Blocking Principle: An irregular form blocks the regular form. But notice that the irregular form is unambiguously adjectival. Therefore, the blocked participial form must also be adjectival; otherwise no competition should arise.[8] This implies that the verbs in (118) have no verbal passives. Importantly, these are not stative verbs; hence the lack of verbal passives cannot be subsumed under type A of (90).

Second, some psych passives resist the regular *da*-phrase and occur only with special prepositions.

(119) a. Gianni è interessato a/*da Maria.
'Gianni is interested to/*by Maria'
b. Gianni è appassionato di/*dalla poesia.
'Gianni is fond of/*by poetry'
(B&R 1988, n. 13)

The occurrence of idiosyncratic prepositions is a hallmark of adjectival passives, which are lexically derived. Such prepositions are excluded in contexts that force the choice of a verbal passive, such as the progressive aspect:

(120) a. Bill was enraged by/at totally innocent remarks.

b. Bill was often being enraged by/*at totally innocent remarks. (Pesetsky 1995, (81))

Granting that *some* Italian class II verbs lack verbal passives, we would still be on safer ground if it were possible to show that *no* such verb has a verbal passive; recall that this follows from (95), given that Italian has neither pseudo- nor quirky passives.

Showing that a language lacks a certain feature is much harder than showing that it has it. In principle, the objection is always conceivable that we have not looked hard enough. Still, I think that in this particular case, an argument with this desirable conclusion is available given certain facts about Italian verb morphology.[9]

Suppose we find an affix X with the following profile.

(121) a. X is a (relatively) productive deverbal affix.
b. X attaches to verbal passive participles.
c. In particular, X attaches to class I passive participles.
d. X does *not* attach to adjectives.
e. X does *not* attach to class II passive participles.

If X satisfies these conditions, two conclusions follow: (i) X attaches to verbs, regardless of stativity (since class I verbs are stative, and allow it); and (ii) class II passives are adjectival. Notice that this test is not vulnerable to Pesetsky's critique, as it explicitly diagnozes verbhood, not eventiveness.

It turns out that the semeliterative prefix *ri-* 're-' fits perfectly the description in (121).

(122) a. *ri- attaches to class I passive participles*
riamato 'reloved'; *riconsiderato* 'reconsidered'; *ridetestato* 'redetested'; *revenerato* 'reworshiped'; *ridimenticato* 'reforgotten'.

b. *ri- does not attach to adjectives*
**rifelice* 'rehappy'; **rifurioso* 'refurious'; **ristanco* 'retired'; **ribello* 'rebeautiful'; **rimalato* 'resick'.

c. *ri- does not attach to class II passive participles*
**risconcertato* 'restartled'; **risorpreso* 'resurprised'; **riscioccato* 'reshocked'; **riterrorizzata* 'reterrified'; **ridivertito* 'reamused'; **ripreoccupato* 'reworried'; **rieccitato* 'rethrilled, reexcited'.

I conclude, then, that Italian has no verbal class II passives, in accordance with (95).

4.3.2 French

Legendre (1993) presents four arguments in favor of the adjectival status of psych passives. First, they are compatible with the adverbials *si*/*très*, which modify adjectives; second, they form causatives with *rendre* 'render', like other adjectives; third, they appear as complements of *rester* 'remain', which selects adjectives; and fourth, they are incompatible with *faire* causatives, unlike normal verbal passives. Notice that of the four tests, only the last one shows that psych passives are not verbal. The first three tests merely show that psych passives have an adjectival use, but do not preclude the existence of a verbal use as well. Since French passive participles are morphologically ambiguous, this possibility cannot be discounted.[10] However, the fourth test does show what it purports to. Consider the data.

(123) a. Ça rendra/*fera Pierre trés célèbre.
'This will make Peter very famous.'

b. *Ça fera Pierre passioné par les timbres.
'This will make Peter crazy about stamps.'

c. Sa visite à la Nouvelle Orléans a rendu Pierre vraiment passioné par le jazz.
'His visit to New Orleans has rendered Peter really crazy about jazz.'
(Legendre 1993, (16), (17a), (18c))

(123a) shows that regular adjectives in French form causatives with *rendre* and not with *faire*. (123b,c) show that the psych passive *passioné* behaves like an adjective in this respect; the ungrammaticality of the *faire*-variant rules out a verbal passive.

Moreover, as in Italian, a general argument can be made on the basis of *re*-prefixation. This prefix attaches to verbs, including class I passives (though some sound awkward), but not to adjectives. Class II passives pattern with the latter, resisting *re*-prefixation (M. A. Friedemann, pers. comm.).

(124) a. *re- attaches to class I passive participles*
reconsidéré 'reconsidered'; ?*réaimé* 'reloved'; ?*redétesté* 'redetested'; *réestimé* 'reestimateded'; ?réoublié 'reforgotten'.

b. *re- does not attach to adjectives*
**recontente* 'recontent'; **reheureux* 'rehappy'; **reprête* 'reready'; **rebelle* 'rebeautiful'; **resûre* 'resure'.

c. *re- does not attach to class II passive participles*
?**réalarmé* 'realarmed'; ?**resurpris* 'resurprised'; ?**rechoqué* 'reshocked'; ?**réeffrayé* 'rescared'; ?**réamusé* 'reamused'; ?**réennuyé* 'rebored'.

One could speculate that the forms in (124c) are ruled out morphologically. That this is not the case is shown by the following minimal pairs.

(125) a. Çe film a rechoqué Pierre.
'That movie reshocked Pierre.'
b. *Pierre a été rechoqué par çe film.
'Pierre was reshocked by that movie.'

(126) a. ?La derniere attaque a réeffrayé Pierre.
'The last attack refrightened Pierre.'
b. *Pierre a été réeffrayé par la derniere attaque.
'Pierre was refrightened by the last attack.'
(G. Legendre, pers. comm.)

Class II participles are acceptable in the perfect tense (125a)/(126a); only their usage as verbal passives is ruled out (125b)/(126b), indicating that the constraint at work is syntactic rather than morphological. French, like Italian, has no verbal class II passives, in accordance with (95).

4.3.3 Hebrew

Unlike French and Italian, Hebrew (past and future) passive is a synthetic form, inflected for tense. Hence, it is unambiguously verbal, and no verb/adjective differentiating tests are needed. Running through the class of Hebrew class II verbs, one finds out that passivization breaks them into three categories.

(127) *Hebrew Psych Passives*

a. *Verbs that have no morphological passive*
hilhiv/**hulhav* 'excite'; *hiršim*/**huršam* 'impress'; *hirgiz*/**hurgaz* 'annoy'; *ci'er*/**co'ar* 'sadden'; *hitmi'ha*/**hutma* 'puzzle'; *hidhim*/**hudham* 'amaze'; *hirgia*/**hurga* 'calm down'; *hamam*/**ne'hemam* 'shock'; *simeax*/**sumax* 'delight'; *ye'eš*/**yoaš* 'despair'.

b. *Verbs that form morphological passive only in the agentive use*
kišef|*kušaf* 'enchant'; *ina*|*una* 'torment'; *gira*|*gura* 'stimulate'; *hifxid*|*?hufxad* 'scare'; *he'eliv*|*hu'alav* 'insult'; *šixnea*|*šuxna* 'convince'; *hesit*|*husat* 'incite'.

c. *Verbs that form morphological nonagentive passive with* me- *'of, from'*
hiftia/hufta 'surprise'; *hitrid/hutrad* 'bother'; *hevix/huvax* 'embarrass'; *zi'aze'a/zu'aza* 'shock'; *hiksim/huksam* 'charm'; *hitrif/hutraf* 'drive someone mad'; *sixrer/suxrar* 'dazzle'.

A great many class II verbs perhaps more than half belong to category (127a). It is not entirely clear why so many class II verbs lack passive forms, even on their agentive readings, although various restrictions on passive in Hebrew are known to exist.[11] At any rate, the issue is orthogonal to the present thesis, which makes the right predictions with respect to the other two categories.

Few verbs belong to category (127b): They allow a verbal passive with the regular *al-yedey*-phrase (*by*-phrase), but only under the agentive reading; the nonagentive reading is ruled out either with *al-yedey* or with *me-*.

(128) a. ha-bosit/ha-bdixa he'eliva et Gil.
the-boss/the-joke insulted ACC Gil
'The boss/joke insulted Gil.'
b. Gil hu'alav al-yedey ha-bosit.
Gil was-insulted by the-boss
'Gil was insulted by the boss.'
c. *Gil hu'alav al-yedey/me- ha-bdixa.
Gil was-insulted by/of the-joke
'Gil was insulted by the joke.'

This state of affairs is not surprising: We already know that agentive psych verbs lose all the special psych properties. If lack of verbal passive is a psych property, the only exceptions to it should have agentive readings. Nor do we expect the nonagentive passives to license prepositions other than *al-yedey* (like *me-*); recall that Hebrew passives are unambiguously verbal, and special prepositions occur only with adjectival passives.

In light of this, the behavior of category (127c) is prima facie puzzling. Although we expect these verbs to have agentive passive with *al-yedey* (129a), we do not expect them to license nonagentive passive with *me-*; but in fact they do (129b).

(129) a. Gil hufta me-/al-yedey ha-orxim.
Gil was-surprised of/by the-guests
'Gil was surprised at/by the guests.'
b. Gil hufta me/*al-yedey ha-xadašot.
Gil was-surprised of/*by the-news
'Gil was surprised at/*by the news.'

The psych passive in (129b) is a strange hybrid from the point of view of current theories: Its morphology classifies it as a verb, whereas the preposition it takes classifies it as an adjective. How should we analyze it?[12]

Let me first point out that this peculiar behavior is exhibited by a very small number of verbs. In fact, the list in (127c) is pretty much exhaustive. I would like to claim that these verbs, although semantically normal, are morphologically anomalous. Specifically, these are intransitive psych verbs with abnormal passive morphology. That is, the form *hufta* 'surprise [passive]', is really derived by reduction of the external causer of *hiftia* 'surprise [active]' (Reinhart's "expletivization," resulting in the promotion of the experiencer to external argument). Normally, such an operation is marked by reflexive or incohative morphology. In these exceptional verbs, however, the lexical marker is the one normally used to mark *saturation* of the external argument namely, passive morphology. Let us refer to this phenomenon as *fake-passive*.

This hypothesis, although striking at first sight, ties together four peculiar properties of fake-passives. First, there is the fact already observed, that these verbs take *me*-PP and not *al-yedey*-PP. This is typical of unergative psych verbs in Hebrew (note that the English translations are approximate, as they involve *by*-phrases).

(130) a. Gil hitrageš me-/*al-yedey ha-seret.
Gil was-moved of/*by the-movie
'Gil was moved by the movie.'
b. Gil nig'al me-/*al-yedey ha-marak.
Gil was-disgusted of/*by the-soup
'Gil was disgusted by the soup.'

Al-yedey introduces a demoted external argument agent/causer or stative experiencer in class I. By contrast, *me-* introduces an internal argument the target/subject matter of Pesetsky (1995). The parallelism between (129b) and (130) supports the idea that fake-passives are in fact unergatives.

Second, unlike the verbs in categories (127a,b) (with very few exceptions), the verbs in category (127c) have no "morphologically normal" unergative variant. In Hebrew, the unergative member in psych alternations often carries reflexive (the *hitpael* paradigm) or incohative (the *nifal* paradigm) morphology. The examples in (130) illustrate these two types. However, the transitive verbs in (127c) have no such counterparts (e.g., *hiftia*/**nifta*/**hitpatea* 'surprise', *hitrid*/**nitrad*/**hittared* 'bother', *hiksim*/**niksam*/**hitkasem* 'charm', etc.). This is readily understood on

the assumption that the fake-passives *are* the unergative counterparts; being morphologically irregular, they block the formation of the regular forms.[13]

Third, if fake-passives are in fact unergatives, they should fail familiar tests for derived subjects. In Hebrew, subject verb inversion (in the absence of preverbal material) is perfect with passives/unaccusatives, but very marginal with unergatives/transitives. Indeed, fake-passives pattern with the latter and not with the former.

(131) a. ani xošev še-huzmenu harbe studentim.
I think that-were-invited many students
'I think that many students were invited.'

b. ??ani xošev še-hitragzu harbe studentim me-ha-švita.
I think that-were-angry many students of-the-strike
'I think that many students were angry at the strike.'

c. ??ani xošev še-hutredu harbe studentim me-ha-švita.
I think that-were-bothered many students of-the-strike
'I think that many students were bothered with the strike.'

Unlike the genuine passive (131a), the psych unergative (131b) (morphologically reflexive) resists inversion. The fake-passive (131c) is similarly marginal with inversion.

Fourth, the idea that the passive forms in (127c) are not real passives explains another peculiarity they exhibit namely, their occurrence as control predicates *without* active counterparts (132a,b).

(132) a. Gil hufta/hutrad/huksam/zu'aza legalot
Gil was-surprised/bothered/enchanted/shocked to-discover
še-ha-arec agula.
that-the-earth round
'Gil was surprised/bothered/enchanted/shocked to discover that the earth is round.'

b. *Rina hiftia/hitrida/hiksima/zi'aze'a et Gil
Rina surprised/bothered/enchanted/shocked ACC Gil
legalot še-ha-arec agula.
to-discover that-the-earth round
'Rina surprised/bothered/enchanted/shocked Gil to discover that the earth is round.'

c. Gil hitragez/nexrad legalot še-ha-arec agula.
Gil was annoyed/appalled to-discover that-the-earth round
'Gil was annoyed/appalled to discover that the earth is round.'

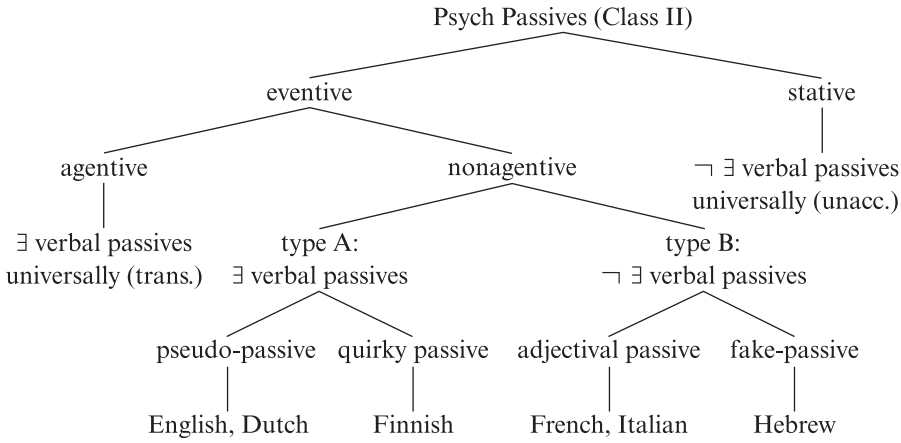
Such active passive asymmetry is unknown among control verbs;[14] it is readily understood if the verbs in (132a) are unergative psych verbs, on a par with those in (132c), which do not carry passive morphology. Indeed, the English counterparts are clearly adjectival passives, resisting the progressive; compare (133a) and (133b).

(133) a. John was (*being) surprised/bothered/enchanted/shocked to discover that the earth is round.
b. John was (being) urged/encouraged/compelled/forced to discover that the earth is round.

I conclude that there is ample evidence against the existence of verbal passive of class II psych verbs in Hebrew, morphological appearance notwithstanding.[15]

To conclude, I lay out the crosslinguistic typology that emerged from the discussion of psych passives. Observe that the association of a particular language with a particular slot in this typology is predictable from independent morphosyntactic properties of the language:

(134) *The Psych Passive Typology*



5 Peripheral Psych Properties

The psych properties discussed hitherto fall together naturally in that they characterize, among transitive verbs, all and only psych verbs. A crucial contrast, recurring throughout, exists between the nonagentive reading of the psych construction (which exhibits the core properties) and the agentive reading (which does not). Furthermore, I have argued that all the core properties can be traced back to the presence of a null prepositional head that assigns inherent case to the experiencer argument.

The two psych properties to be discussed in sections 5.1 and 5.2 the T/SM restriction and causative psych nominalizations fall outside this description. First, they are neutral with respect to agentivity; second, they are less rigid, tolerating idiosyncratic exceptions; and third, they seem to involve diverse morphosyntactic mechanisms. For these reasons I distinguish them from the core psych properties. The property to be discussed in section 5.3 backward binding perhaps should be more aptly called a pseudo-psych-property. In spite of its dominance in the early literature (starting with Postal 1971), there is every reason to believe that it has nothing to do with psych constructions as such. This has already been realized by several researchers, and their case will be defended below.

The discussion to follow will not attempt to develop an account of the T/SM restriction and causative psych nominalizations. As hinted above, I think that such an account will ultimately incorporate various ingredients that do not bear directly on the syntax of psych verbs. Nevertheless, this discussion is methodologically warranted in light of the significant attention that these topics have drawn in the literature on psych constructions. If I am correct, this attention has been misplaced, obscuring our understanding of the essential nature of the phenomenon. Thus, this section is somewhat of a detour from the main plotline of this monograph; the reader who is impatient with dead ends is advised to skip directly to chapter 6.

5.1 The T/SM Restriction

Pesetsky (1987, 1995) observed that the semantic roles borne by the "theme" argument in subject-experiencer and in object-experiencer predicates are not identical. In the first case, the "theme" object is interpreted as a target of emotion or subject matter (T/SM), whereas in the second case the "theme" subject is interpreted as a cause. Thus, for example, *The article angered Bill* does not entail *Bill was angry at the article*, because the article could have provoked an anger in Bill directed at the government. Surprisingly, though, the two logically distinct arguments cannot be realized simultaneously; this is the T/SM restriction:

(135) a. *The article in the *Times* angered Bill at the government.
b. *The Chinese dinner satisfied Bill with his trip to Beijing.
c. *Something Bill had said bothered Mary about her future.
d. *The distant rumbling frightened Mary of another tornado.
(Pesetsky 1995, (171))

Pesetsky shows that the restriction is not semantic, as periphrastic (causative) counterparts exist: *The article in the* Times *made Bill angry at the government*. The source of the restriction, in Pesetsky's analysis, is the need of the affixal *CAUS* null morpheme (which is present in every causative psych construction) to raise to the root. In a cascade configuration, the intervening preposition (heading the T/SM PP) blocks this movement. The resulting structure either violates the Stray Affix Filter or the Head Movement Constraint.

A crucial observation, missing from Pesetsky's discussion, is the fact that psych verbs used agentively also obey the T/SM restriction.

(136) a. *We all tried to satisfy Bill with his trip to Beijing.
b. *Bill maliciously worried Mary about her future.
c. *The weather man deliberately frightens people of another tornado.

This is significant because all of the core psych properties do *not* persist in agentive contexts; indeed, the agentive/nonagentive contrast was a recurring diagnostic for these properties in the preceding sections. Evidently, the T/SM restriction is not of a piece with these properties.[1] Notice that this is unexpected under Pesetsky's analysis, which does not assume a *CAUS* morpheme in agentive constructions.[2]

Other facts cast further doubt on the claim that the T/SM restriction is a core psych property. Pesetsky himself observes that with certain psych verbs, it is violable:

(137) a. The rain discouraged us from our tasks.
b. Sue's remarks inspired them to action.
c. These results inclined us toward the more difficult course.
d. Mary shamed us into going to the movies.
(Pesetsky 1995, (543))

In Spanish and Greek, a near-translation of (135a) is fine.

(138) a. El artículo enojó a Bill con la prensa.
'The article angered Bill at the media.'
(Franco 1990, fn. 7)
b. To arthro stin efimerida thimose tin Maria me ta
The article to-the newspaper angered the Maria with the
mesa mazikis enimerosis
media massive.GEN information.GEN
'The newspaper article angered Mary with the media.'
(E. Anagnostopoulou, pers. comm.)

More seriously, the proper distinction between the cases that obey and those that disobey the restriction does not correspond to synthetic versus periphrastic causatives. Mulder (1992) observes that in Dutch (and English), some periphrastic causative psych constructions exhibit the T/SM restriction.

(139) a. drie flessen wijn maakten me vrolijk (*over het voorval).
three bottles (of) wine made me merry (*over the event)
b. Jeltsin's toespraak wond Gorbatsjov op (*over de
Yeltsin's speech excited Gorbachov PRT (*about the
toestand in Rusland).
situation in Russia).
c. The publication of his prior conviction in the *Boston Herald*
yesterday gave John a hard time (*about his past).
(Mulder 1992, 144, (74), (76), (77))

McGinnis (2001) argues that the relevant factor is whether the causative morpheme is lexically specified or the default form. Thus, in Chinese, the T/SM restriction obtains only with the lexically specified *shi* and not with the default *ling*, even though both are nonaffixal.

(140) a. Wo dui zengfu hen shiwang.
I with government very disappointed [Adj.]
'I was very disappointed with the government.'

b. Ni shi wo wang.
you V1 me V2-disappoint
'You disappointed me.'
c. *Ni **shi** wo dui zengfu wang. [any order]
you V1 me with government V2-disappoint
d. Ni **ling** wo dui zengfu hen shiwang.
you CAUS me with government very disappointed [Adj.]
'You made me disappointed with the government.'
(McGinnis 2001, (16))

Conversely, synthetic psych verbs in Japanese that are formed with the default morpheme *(s)ase* do not show the T/SM restriction, whereas those that take the lexically specified *asi* do.

(141) a. Kimiko-ga sono koto-ni odoroi-ta.
Kimiko.NOM that fact.DAT surprise-PAST
'Kimiko was surprised at that fact.'
b. Sono ronbun-ga Kimiko-o odorok-**asi**-ta.
that paper.NOM Kimiko.ACC surprise-CAUS-PAST
'That paper surprised Kimiko.'
c. *Sono ronbun-ga Kimiko-o sono koto-ni odorok-**asi**-ta.
that paper.NOM Kimiko.ACC that fact.DAT surprise-CAUS-PAST
'That paper surprised Kimiko at the fact.'
d. Sono ronbun-ga Kimiko-o sono koto-ni odorok-**ase**-ta.
that paper.NOM Kimiko.ACC that fact.DAT surprise-CAUS-PAST
'That paper made Kimiko surprised at the fact.'
(McGinnis 2001, (15))

McGinnis concludes from these facts that the T/SM restriction does not diagnose zero or affixal morphemes, but rather lexically restricted causative morphemes (which must be adjacent to the root). Notice that nothing in this statement makes any special reference to psych verbs as such. Indeed, Pesetsky cites data from Higgins (1973) highly reminiscent of the T/SM restriction. Higgins noted that many English adjectives can be predicated either of a person or a person's manner/remarks. However, a complement to the adjective can appear only in the first context:

(142) a. John was proud (of his son).
b. Sue was nervous (about the exam).
c. Tom was fearful (of an earthquake).

(143) a. John's manner was proud (*of his son).
b. Sue's behavior was nervous (*about the exam).

c. Tom's attitude was fearful (*of an earthquake).
(Pesetsky 1995, (181), (182))

Here as well, Pesetsky postulates a null morpheme, *SUG* (interpreted roughly as "suggesting that . . ."), which must raise to the adjectival head across the prepositional head of the complement. McGinnis (2001) translates this account as well into her system (see Landau to appear for an extensive discussion of argument saturation in adjectives).

Let me stress that all these facts deserve to be studied thoroughly and explained. Right now, though, I wish to set them apart from core psych properties, as they seem to involve many independent factors that are not necessarily unique to psych constructions.

5.2 Causative Nominalizations

It is an old observation that psych nominalizations lack any causative force (Lakoff 1970).

(144) a. Bill's continual agitation about the exam was silly.
b. Mary's constant annoyance about/at/with us got on our nerves.
c. *The exam's continual agitation of Bill was silly.
d. *Our constant annoyance of Mary got on our nerves.
(Pesetsky 1995, (199a b), (208a b))

According to Grimshaw (1990), the same reason that blocks reflexive *si/se* and passivization of class II verbs also blocks nominalization: the lack of an external argument (which must be suppressed in process nominalizations). More precisely, the kind of nominalization that is excluded is the *nonagentive process* kind: Result nominalizations do not project an argument structure (hence do not suppress the base external argument), and agentive process nominalizations do select an external argument. Both types are fine with psych roots. Indeed, Grimshaw cites the following contrasts in support of this prediction.

(145) a. The embarrassment/humiliation of the bystanders.
b. The amusement/entertainment of the children.
c. John's/*the event's embarrassment/humiliation of Mary.
d. The clown's/*movie's (constant) amusement/entertainment of the children.
(Grimshaw 1990, 119 120, (26c), (28a), (26a), (27), (28c,d))

(145a,b) have only the result (state) reading; and (145c,d), the process nominals, tolerate only an agentive possessor.

Pesetsky (1995), who claims that class II verbs do select an external argument, offers an alternative account. In his analysis, causative psych verbs are formed with a null causative affix, *CAUS*; nominalization attaches a nominalizer affix to this complex: [[[psych-root] *CAUS*] nominalizer]. This configuration violates Myers's generalization (Myers 1984), which does not permit (derivational) affixation to zero-derived words.

Ultimately, Pesetsky argues, following Fabb (1988), that Myers's generalization is epiphenomenal (and indeed, violated by the suffixes *-er* and *-able*) and that the relevant generalizations constrain the type of affixes that can attach to *CAUS* rather than *CAUS* itself. He devises a complex system where each nominal suffix is lexically associated with distributional restrictions. The fact that zero morphemes, including *CAUS*, disallow further affixation is thereby decomposed into many smaller facts about specific nominalizers.

This treatment, I think, misses an important crosslinguistic fact: As far as we know, the ban on causative psych nominalizations is universal and *indifferent to morphology*. Thus, it applies in Hebrew too, where causative morphology is both overt and nonconcatenative. It is hard to see how the Fabb/Pesetsky system can extend to this language.

(146) a. *zi'azua Rina/ha-xadašot et Gil.
shock.CAUS.NMZ Rina/the-news ACC Gil
'Rina's/the news' shock of Gil'

b. *ha-hafta'a šel Gil et išto tuxnena
the-surprise.CAUS.NMZ of Gil ACC his-wife was-planned
zman rav.
time long
'Gil's surprise of his wife was long planned.'

c. *ha-bilbul (ha-mexuvan) šel Gil/ha-kolot
the-bafflement.CAUS.NMZ (the-deliberate) of Gil/the-voices
et Rina.
ACC Rina
'Gil's/the voices' (deliberate) bafflement of Rina'

These examples also demonstrate the first important reason why the restriction on nominalizations should be seen only as a *peripheral* psych effect: It persists even in agentive contexts. In fact, this has already been noted for English as well.

(147) *John's deliberate amazement/depression/pleasure/delight/disgust/interest of Mary.
(Iwata 1995, (41))

Though not all of the base verbs in (147) allow agentive interpretations, those that do still disallow agentive nominalizations. Grammatical agentive psych nominalizations, as in (145c,d), are quite rare, as the following examples further illustrate.

(148) a. John deliberately scared/frightened/bothered/terrified Mary.
b. *John's deliberate scare/fright/bother/terror of Mary.

This fact has escaped the attention of most researchers. Again, as in the case of the T/SM restriction, it sets nominalization apart from all the other core psych properties, which fail to obtain in agentive contexts.

Other facts that point to the same conclusion are more well known. As Pesetsky (1995) observes, restrictions on nominalization are not limited to psych verbs. They are also found with the so-called *SUG*-predicates and with zero-derived incohatives.

(149) a. Your remarks were angry/*your remarks' anger
b. her expression was optimistic/*her expression's optimism
c. his words were sad/*his words' sadness
(Pesetsky 1995, (211), (212), (214))

(150) a. The thief returned the money/*the thief's return of the money
b. Inflation diminished his salary/*inflation's diminishment of his salary
c. Bill ceased/stopped the activity/*Bill's cessation/stoppage of the activity
(Pesetsky 1995, (231), (233), (236))

Pesetsky suggests that all these cases involve embedded zero affixes, violating Myers's generalization. However, if the restriction on psych nominalizations is indeed orthogonal to zero morphology, then it is far from obvious that all these facts fall together. At any rate, the lack of causative nominalizations does not necessarily point to a specific property of psych verbs as such.

5.3 Backward Binding

Postal (1971) argued that the fact that experiencer objects can bind anaphors embedded inside the theme subject tells us something about their special syntax. This idea was resurrected by Hermon (1985), Stowell (1986), and Belletti and Rizzi (1988), and later adopted, in a different form, by Pesetsky (1995).

(151) a. Questi pettegolezzi su di sé preoccupano Gianni più di ogni altra cosa.
'These gossips about himself worry Gianni more than anything else.'
b. *Questi pettegolezzi su di sé descrivono Gianni meglio di ogni biografia ufficiale.
'These gossips about himself describe Gianni better than any official biography'
(B&R 1988, (57))

(152) a. Each other's supporters worried Freud and Jung.
b. Each other's remarks annoyed John and Mary.
c. *Each other's parents harmed John and Mary.
d. *Each other's teachers insulted John and Mary.
(Pesetsky 1995, (121b), (122), (127b,c))

For Postal, at deep structure the experiencer is a subject and the theme is an object. Binding (or "reflexivization") applies at that level, where the proper command relations hold. A "flip" transformation was held responsible for the inverse surface structure of these verbs. For B&R, both the experiencer and the theme are internal arguments, but still, the former c-commands the latter at D-structure. Condition A may apply at that level, before the theme is raised to the subject position. For Pesetsky, the theme (actually, a causer) is associated with two θ-positions one below the experiencer and one above it. The causer is generated in the lower position and moves to the higher one, but it is in virtue of the former (just as in B&R's analysis) that Condition A is satisfied.

However, subsequent research has challenged the claim that backward binding falls under Condition A, or indeed, that it is even a structural phenomenon (Zribi-Hertz 1989; Bouchard 1992; Pollard and Sag 1992; Reinhart and Reuland 1993; Iwata 1995; Arad 1998; Cançado and Franchi 1999). That backward binding is licensed by the causative nature of the construction rather than its psych properties can be seen in (153).

(153) a. Each other's remarks made John and Mary angry.
b. Pictures of himself give John the creeps.
c. Pictures of each other caused John and Mary to start crying.
d. Each other's criticism forced John and Mary to confront their problems.
(Pesetsky 1995, (124a,d), (125a,b))

Pesetsky extends his "doubly filled Cause" analysis to these cases as well, at the cost of several auxiliary stipulations. Yet even that cannot explain the following cases.

(154) a. The picture of himself in *Newsweek* shattered the peace of mind that John had spent the last six months trying to restore. (Pollard and Sag 1992, (62c))
b. These nasty stories about himself broke John's resistance. (Bouchard 1992, (38c))
c. These rumors about himself caught John's attention. (Iwata 1995, (72c), due to D. Pesetsky)

Here, the antecedent of the anaphor (*John*) fails to c-command it even at D-structure. Cases like this strongly indicate that backward binding is conditioned (at least partially) by nonstructural factors. More evidence to this effect is provided by the following contrast.

(155) That book about/??by herself struck Mary as embarrassing. (Bouchard 1992, (37a), (40a))

Bouchard (1992, 1995) points out that backward binding applies only when the DP containing the anaphor is construed as a representation of the referent of the anaphor. This might be too strong a statement, in light of (152a), but it does trace the peculiar properties traditionally associated with *picture* anaphora. The general response to these effects is to classify backward binding with cases of *logophors*, whose antecedent must be a subject of consciousness or a participant whose point of view is evaluated in the discourse (see Zribi-Hertz 1989; Sells 1987). At any rate, it is safe to conclude that backward binding is not a purely structural phenomenon, and hence does not attest to any specific feature in the syntax of psych verbs.

6 Interim Conclusion

Let us review the major results and conclusions achieved so far. We have collected and classified a variety of psych properties across several languages. The picture that emerges is the following.

(156) *A Classification of Psych Properties*

(I) **Core Properties**

(a) *All Class II Verbs (Nonagentive)*

1. Overt obliqueness of experiencer (Navajo, Irish, Scottish Gaelic).
2. Accusative → Dative alternations (Italian, Spanish).
3. Islandhood of experiencer (Italian, English).
4. PP-behavior in *wh*-islands (English, Hebrew).
5. No synthetic compounds (English).
6. No Heavy NP Shift (English).
7. No Genitive of Negation (Russian).
8. Obligatory clitic-doubling (Greek).
9. Obligatory resumption in relative clauses (Greek, Hebrew).
10. No *si*/*se*-reflexivization (Italian, French).
11. No periphrastic causatives (Italian, French).
12. No verbal passive in type B languages (Italian, French, Hebrew).

(b) *Class III and Stative Class II (Unaccusatives)*

1. No verbal passive (English, Dutch, Finnish).
2. No periphrastic causatives (French, Italian dialects).
3. No forward binding (see section 8.4).

(II) **Peripheral Properties**

1. The T/SM restriction.
2. No causative nominalizations.
3. Backward binding.

The theoretical claim I made was very simple: Non-nominative experiencers universally bear inherent case, where the latter is assigned by a preposition. The interesting implication is for class II verbs, where the superficial accusative object, the experiencer, is in fact an oblique argument. I argued that this single assumption, interacting with independent principles of syntax and morphology, derives the entire set of properties in (156-I.a). Although the idea that accusative experiencers bear inherent case is not novel in itself, as far as I know its full empirical efficacy has never been explored.[1] For example, B&R (1988), who first proposed this idea, either drew the wrong conclusions from it (e.g., *all* class II verbs are unaccusative) or failed to recognize its explanatory value.

Simple as it is, this idea is incompatible with quite a few analyses that argue explicitly for accusative experiencers being canonical direct objects, that is, for their receiving structural case (Herschensohn 1992, 1999; Reinhart 2000, 2001, 2002; Bennis 2004). There is a family of proposals that decompose class II verbs into causative structures in the syntax, where a null causative verb assigns structural case to the experiencer, much like its overt counterpart *make* (Franco 1990; Saltarelli 1992; Park 1992; Mulder 1992). Likewise, in the Relational Grammar literature (Legendre 1989, 1993; Cresti 1990; Legendre and Akimova 1993), class II verbs participate in the antipassive construction, where the experiencer is demoted from an initial 1 (deep subject) to a final 2 (surface direct object), the latter crucially distinct from the Oblique relation. If the ample evidence presented in chapters 2 4 indeed establishes the obliqueness of accusative experiencers as a universal fact, then all these analyses must be revised.

A legitimate question at this point is the following: If accusative experiencers *are* PPs, why don't they manifest *all* properties of PPs, in *all* languages? Why do we find, crosslinguistically, a mixed picture? For example, accusative experiencers in Italian behave like PPs with respect to left-dislocation and extraction, but not with respect to resumption in relative clauses, unlike Greek and Hebrew (see B&R 1988, n. 29). Likewise, in both French and Italian, they trigger participial agreement a property of direct objects.[2] And as we saw above, they do passivize, albeit not universally.

The general reply to this question is perhaps not extremely enlightening, but nonetheless observationally true: In many languages, direct objects with inherent case retain some of their DP properties while losing others. Simply put, there is no one-to-one mapping between morphology and syntax, and specific analyses must be sought in each case where dis-

crepancies arise. For example, the lack of resumption of extracted experiencers in Italian relative clauses may be illusory, and a null resumptive *pro* is actually used in place of the overt pronoun that appears in Greek/Hebrew; Romance participial agreement might be triggered by *morphological* accusative, disregarding the structural/inherent distinction; and as argued at length above, languages might resort to auxiliary strategies in order to passivize an oblique argument.

I am not trying to suggest here that any of these ideas is necessarily true. Rather, my general point is that superficial similarities that accusative experiencers bear to direct objects, and parallel dissimilarities to oblique arguments, do not invalidate the present account in and of themselves. Short of specific analyses, such observations are hardly informative. By contrast, I believe that the present account does meet the challenge of explaining *why* accusative experiencers display the properties they do, in so many unrelated languages.

In the remainder of this monograph we will pursue a more radical thesis concerning the nature of non-nominative experiencers. We will see that these arguments do not only bear inherent case, but that this case is *quirky*, in a sense more universal than previously thought. This thesis will provide insight into several other psych properties that have thus far remained undiscussed.

II The Scope of Experiencers

7 Experiencers as Quirky Subjects

7.1 Quirky Experiencers: Direct Evidence

In the previous chapters we saw that non-nominative experiencers (in classes II/III) bear inherent case; furthermore, it was argued that this property is universal. In this chapter we will see that the inherent case of these experiencer arguments is often *quirky*. Quirky case is inherent case that can be realized in subject position; accordingly, a quirky subject is just an argument that displays most canonical subject properties (except for agreement), but bears inherent case.

The quirkiness of experiencers is a robust crosslinguistic fact, although not as uniform as their inherent case. One can distinguish three types of languages along the quirkiness scale. On one extreme, we have Greek, Icelandic, and Faroese. In those languages, dative, accusative, or genitive experiencers freely occur preverbally as quirky subjects. Often (and in Greek, always) the construction is reversible, also allowing the nominative theme to surface as the subject.

(157) a. Tu Petru tu aresi to krasi. (Greek)
the Peter.DAT cl.DAT likes the wine.NOM
'Peter likes the wine.'
b. To krasi tu aresi tu Petru.

(158) a. Ton Petro ton endhiaferum ta mathimatika.
the Peter.ACC cl.ACC interest the mathematics.NOM
'Mathematics interests Peter.'
b. Ta mathimatika ton endhiaferum ton Petro.
(Anagnostopoulou 1999, (7), (16))

Anagnostopoulou (1999) argues convincingly that the preverbal experiencer in these examples is a subject rather than a (clitic-)left-dislocated

argument. Not only is this word order more natural than the experiencer-final word order, but the experiencer can be a bare quantifier (unlike left-dislocated arguments) and is perfect in contexts that strongly disfavor left dislocation (relative clauses). Moreover, like canonical subjects, the preverbal experiencer can control absolutive adjuncts, antecede a subject gap in conjunction reduction, trigger obviation, and bind an anaphor. Anagnostopoulou shows that those properties characterize both dative and accusative quirky experiencers in Greek.[1]

Icelandic is perhaps the language where quirky subjects are most pervasive, and quirky experiencers are a common (though not exclusive) example of this.

(159) a. Mig dreymdi ömmu.
I.ACC dreamt grandma.ACC
'I dreamt of grandma.'
b. Petta hefur alltaf hentað mér.
this.NOM has always pleased me.DAT
'This has always pleased me.'
c. Mér hefur alltaf hentað petta.
me.DAT has always pleased this.NOM
'I have always been pleased with this.'
(Barðdal 1999, (2c), (4))

That the preverbal argument in these constructions is a genuine subject has been argued extensively in the literature (e.g., Zaenen, Maling, and Thráinsson 1985; Sigurðsson 1989, 1992, 2000). Except for agreement, Icelandic quirky subjects exhibit all canonical subject properties in diagnostic environments like subject verb inversion, conjunction reduction, reflexive binding, raising, and control.

Interestingly, not all psych verbs in Icelandic allow the "dual" word order seen in (159b,c); some verbs allow only the quirky experiencer to surface in the subject position (Barðdal 1999, 2001; Platzack 1999). In particular, all double accusative verbs, as in (159a), disallow the variant with a theme subject (Platzack 1999). This follows straightforwardly from our hypothesis that the accusative case on the experiencer is inherent, hence potentially quirky, whereas the case of the theme is structural. Since structural accusative cannot be checked by T^0, the theme argument of double accusative psych verbs cannot be realized as a subject.[2]

Faroese is another language where quirky subjects can be either dative or accusative (genitive case being quite rare in the language). Surprisingly, unlike Icelandic, to which it is closely related, but like Greek, quirky subjects in Faroese are almost exclusively experiencers.

(160) a. Meg droymdi dreym.
me.ACC dreamt dream.ACC
'I dreamt a dream.'
b. Mær dámar mjólkina.
me.DAT likes the milk.ACC
'I like the milk.'
(Barnes 1986, (2), (3))

Barnes notes that Faroese differs from Icelandic in disallowing nominative objects (although historically, they existed). Thus, the theme argument occurs in the nominative only in those "dual verbs" that allow the theme to surface as the subject. At any rate, the quirky experiencers pass a battery of subject tests, including reflexive binding, stylistic inversion, ellipsis, ECM subjects, conjunction reduction, and so on.[3]

In the middle of the quirkiness scale, we find languages like Italian, Spanish, and Dutch. In these languages, class III sentences are reversible but class II ones are not.[4] That is, only dative experiencers, not accusative ones, can occur as subjects.

(161) a. A Gianni è sempre piaciuta la musica. (Italian)
to Gianni is always pleased the music
'Music always pleased Gianni.'
b. La musica è sempre piaciuta a Gianni.
(B&R 1988, (101))

(162) a. dat de taalkundige die analyse opviel. (Dutch)
that the linguist.DAT the analysis.NOM occurred-to
'that the analysis occurred to the linguist.'
b. dat die analyse de taalkundige opviel.
(Mulder 1992, 151, (5))

Here as well, evidence exists that the preverbal dative argument is a real subject. B&R (1988) show that it can be a negative quantifier (unlike left dislocated arguments) and appear in contexts that strongly disfavor topicalization (adverbial and relative clauses). Mulder (1992) shows that the Dat-Nom-V word order is unmarked for Dutch class III verbs: The nominative argument licenses *vat voor* split (a diagnosis of direct object positions), and the dative argument is in complementary distribution with the expletive *er* (a subject diagnosis).

Spanish also allows dative subject experiencers.

(163) a. A Marcos le gusta la música coral.
to Mark cl.DAT likes the music choral
'Mark likes choral music.'

b. A Adriana le sorprende tu actitud.
to Adriana cl.DAT surprises your attitude
'Your attitude surprises Adriana.'
(Masullo 1992, (1), (6))

Masullo (1992) shows that these preverbal datives differ from standard left-dislocated datives in the same ways their Italian counterparts do. Moreover, they participate in raising and they control absolute adjuncts just like normal nominative subjects. Masullo assimilates these cases to a productive process of locative inversion in Spanish. I will return to this proposal below and suggest that it offers an important insight. For now, however, it is sufficient to note that Spanish has no quirky accusative experiencers.[5]

Finally, at the other extreme, we find languages that disallow any kind of quirky experiencer, like English, French, and Hebrew.

Thus, we seem to have a three-way parametric picture.

(164) *Possible Case of Quirky Subjects*
a. *All cases*: Icelandic, Faroese, Greek.
b. *Dative only*: Italian, Spanish, Dutch.
c. *No case*: English, French, Hebrew.

Notice that this state of affairs calls for a weakening of Marantz's (1991) thesis that the licensing of subjects (EPP) and their case realization are completely divorced. Although we keep to Marantz's claim that nominative case and the EPP are mutually independent, we must maintain a residue of "case sensitivity" in the EPP. It seems to be just a brute fact about certain languages that some morphological cases (e.g., dative) are tolerated in subject position and others (accusative/genitive) are not.[6]

In principle, languages could instantiate other options that are not represented in (164) (e.g., only accusative quirky subjects), but in practice, this is doubtful. Overwhelmingly, it seems that the unmarked case for quirky subjects across languages is dative (e.g., Russian, Polish, Georgian, Japanese, Korean); if a language allows nondative quirky subjects, it also allows dative ones, but the opposite does not hold. Moreover, finer distinctions among the nondative cases vis-à-vis quirkiness are not attested. These implicational universals whatever their source is are not captured by the description in (164).

To express the tripartite picture in (164) parsimoniously, we need a descriptive vocabulary below the level of the case labels Nom/Dat/Acc/Gen. Suppose, then, that the morphological case categories in

Nominative/Accusative languages decompose into a binary feature system in the following manner.

(165) *A Feature Analysis of Morphological Case*
a. Nominative = [+n,−a]
b. Dative = [+n,+a]
c. Accusative = [−n,+a]
d. Genitive = [−n,−a]

The features [n] and [a] are mnemonically related to Nom and Acc, much like the relation between the features [V]/[N] and the syntactic categories Verb/Noun. I will not offer here any substantial argument from morphology to motivate [n] and [a], although obviously such arguments are relevant to the proposal. The purpose of the system in (165) is simply to facilitate the expression of important crosslinguistic generalizations; to the extent that other (perhaps better motivated) systems can achieve the same goal, they could supplant (165).

We can now state the Quirky Subject Parameter as follows.

(166) *Quirky Subject Parameter (QSP)*
At PF, [Spec,TP] must be marked:
a. [+n,−a] (English, French, Hebrew)
b. [+n] (Italian, Spanish, Dutch)
c. Anything (Icelandic, Faroese, Greek)

The QSP acts as a morphological filter at PF, filtering out subjects that do not bear the morphological feature(s) required of subjects in the language. Notice that it is orthogonal both to the EPP (which is, presumably, universal) and to case checking (which applies in the syntax/LF, not PF). In fact, we do not assume that quirky subjects establish any *case* relation with T^0. Marked with inherent case, they bear a case relation only to the preposition that governs them.[7] The standard assumption in recent work on quirky subjects is that their movement to the subject position is triggered by the EPP. I keep to that assumption; however, in the next section I argue that *experiencer* quirky subjects have an additional reason to raise to the subject position.

7.2 Experiencers and LF Quirkiness

The past twenty years have seen the gradual deconstruction of the notion of "subject" (McCloskey 1997; Sigurðsson 2000). Subjecthood is no longer viewed as a package deal; rather, particular subject properties

are distributed over separate dimensions (structural positions, case, agreement, EPP, thematic prominence, topicality, etc). Importantly, again and again we see that these properties can be dissociated, within and across languages, such that the question "Is X a 'real' subject?" becomes increasingly vague. Are expletives "real" subjects? Are they more or less so than nominative associates? Are quirky subjects "real" subjects, even if they fail to bind anaphors? Is there any single criterion for subjecthood? It is not clear that any of these questions is meaningful.[8]

Nonetheless, meaningful questions can be posed, and answered, once we restrict attention to specific subject attributes. Consider the case of interest: experiencers. Most studies of psych verbs within the GB tradition, although differing radically in details, share one implicit assumption: Non-nominative experiencers are not subjects. The reasons for making that assumption are pretty obvious: These arguments bear morphological case (accusative/dative), which is typical of objects; they do not trigger verb agreement; they normally occupy object positions; and in general, they lack any of the perspicuous subject properties associated with nominative arguments.

However, in light of the above considerations, these observations do not warrant the sweeping conclusion that non-nominative experiencers are not subjects. At most, non-nominative experiencers lack certain subject properties. More significantly, we now know that some of these observations were unfortunately biased by language-particular factors. In some languages, all or some non-nominative experiencers *can* surface in subject positions. English happens not to be one of them, but why should English be the norm?

Indeed, the intuition I would like to pursue in this section is that it is languages like Greek, Icelandic, and Faroese that represent the general case, whereas English-type languages are special. The meaning of "general" and "special" here is, of course, not statistical. Rather, the "general case" is the one that reflects UG more transparently, regardless of actual crosslinguistic ubiquity. The level where crosslinguistic differences dissolve, where different word orders are collapsed, is LF. In this spirit, I propose the following universal.

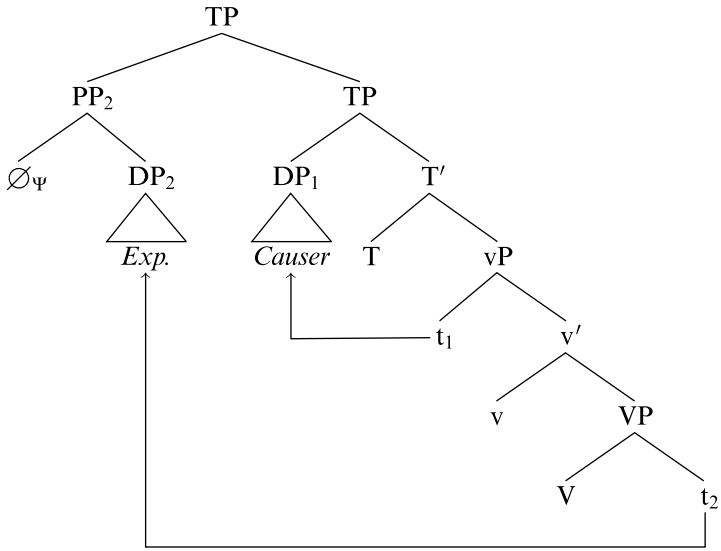
(167) All experiencers are LF-subjects.

The term "subject" in (167) refers specifically to subject *position*, namely, [Spec,TP]. Thus, I make no global claims about the "subjecthood" of experiencers, but I do make a strong claim about their LF position. For now, I suspend discussion on *why* (167) should be true until chapter 9.

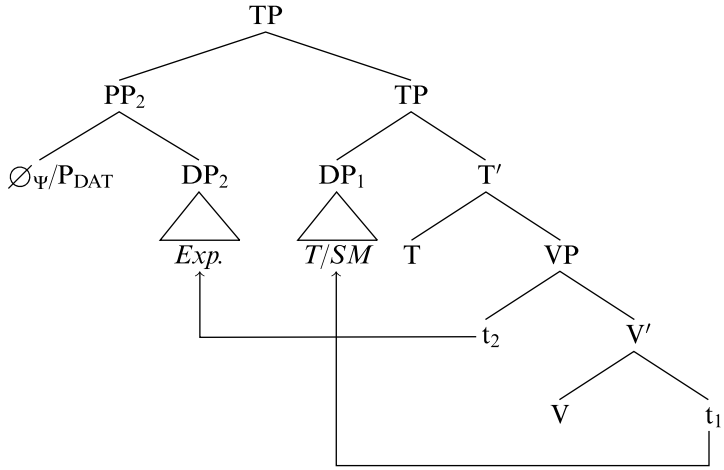
Consider the consequences. (167) is trivially true for class I verbs, where the experiencer is the nominative surface subject. As shown in the previous section, (167) is also empirically true for quirky experiencers in quite a few languages. The only domain in which (167) becomes non-trivial, perhaps surprising, is with respect to surface *object* experiencers, whether they may occur as subjects (like accusatives/datives in Greek/Icelandic/Faroese and datives in Italian/Spanish/Dutch) or not (like accusatives/datives in English/French/Hebrew). All these, according to (167), must end up as subjects by LF.

How can this come about? In a standard psych construction of the form Nom-V-Acc/Dat, [Spec,TP] is occupied by the nominative theme. However, the possibility of multiple specifiers is well attested: Japanese and Korean exhibit double A-specifiers (Ura 1996) and Slavic languages exhibit multiple Ā-specifiers (Richards 1997). Moreover, Richards shows convincingly that it is very common for a functional head to license only one *overt* specifier but several *covert* ones. This is precisely what I take to be the case with object experiencers: The theme argument raises to [Spec,TP] overtly, and the experiencer raises to a second [Spec,TP] at LF. This effect deserves to be called *LF quirkiness*; it gives rise to the following LF configurations:[9]

(168) a. *Eventive Psych Verbs: LF*



b. *Stative Psych Verbs: LF*



Strictly speaking, then, *all* non-nominative experiencers are quirky: Depending on the language in question and on morphological case, this quirkiness can be expressed either overtly (what is standardly called the "quirky subject") or covertly (the "second" subject in (168)).

A few technical comments are in order concerning the LF configurations above. The second LF-specifier, just like the first one, is an A-position, the "adjunct" appearance being an artifact of the limitations of tree notation. This is related to the fact that the feature that triggers this movement to be discussed in the next chapter is not an operator feature. Second, both specifiers mutually c-command (or m-command) each other. In fact, they are structurally nondistinct, a point that will be of empirical significance later on. Third, although I placed the LF-specifier outside the overt one, I am not committed to this choice, and the reverse order ("tucking-in") is equally compatible with everything I say here.

Consider how the pieces of the system (166), (167), and (168) work together. In a language of type (166c), any non-nominative experiencer can satisfy (167) by overt raising to [Spec,TP]. The same goes for dative experiencers in languages of type (166b). Alternatively, the nominative theme can raise overtly to [Spec,TP], postponing to LF the raising of the object experiencer. This is how we account for the alternating surface patterns Dat/Acc-V-Nom or Nom-V-Dat/Acc in such languages (cf. (157) (162)). In languages of type (166a), (167) cannot be satisfied in overt syntax, since the occurrence of non-nominative case in [Spec,TP] would violate the setting of the QSP in these languages. Crucially, though, since the QSP is a PF parameter, it does not govern LF opera-

tions. Thus, in these languages (167) is satisfied by LF-movement of the experiencer to a second [Spec,TP], as depicted in (168).

What is the trigger for experiencer LF-raising? Recall that nonnominative experiencers are prepositional objects in our analysis, governed by $Ø_{\psi}$ (class II) or the dative preposition (class III). Clearly, something about the special semantic interpretation of experiencers arises from these prepositions. This interpretation, I suggested, involves a locative relation between the stimulus/causer and the experiencer. For simplicity, let us assume that all locative relations, including "mental" ones, are encoded by the feature [loc]. Thus, prepositions like *at*, *into*, and $Ø_{\psi}$ bear [loc], whereas *for* and *despite* do not.

Adapting traditional ideas, I will assume that T serves as the spatiotemporal anchor of the clause. This implies that all temporal and locative descriptions in the clause must form a semantic and a syntactic relation with T; furthermore, if the semantic relation is predication or functional application, then the syntactic relation must be sisterhood (Heim and Kratzer 1998). Notice that temporal and locative modifiers are usually assumed to attach to some projection of T. Arguments, however, are generated inside VP. It follows that locative arguments, including experiencers, must raise to TP. As it is semantically motivated, this movement does not require an additional feature on T, attracting or checking the [loc] feature; however, we may leave this open for the moment. Note that other types of covert movement have been taken to be semantically motivated most notably, quantifier raising.

Finally, we understand the EPP as a PF parameter, regulating whether and to what extent a specifier of a functional head may or must be filled. In English-type languages, [Spec,TP] must be filled by one and only one constituent. Given (166a), it must be the theme. Consequently, the experiencer PP may only raise covertly to form the requisite semantic relation with T. We thus obtain the derivations in (168). In section 9.1, I return to experiencer raising and attempt to relate it to other EPP phenomena.

The idea that object experiencers are subjects at some level of representation, although uncommon in the GB/Minimalist literature, is not unheard of. In fact, the earliest generative analyses assumed that object experiencers are generated as deep subjects and are subsequently "flipped" with the deep object, the theme (Lakoff 1970; Postal 1971). Within Relational Grammar, object experiencers are also deep subjects (initial 1s), later demoted to object positions by inversion or antipassive (Perlmutter 1984; Harris 1984; Legendre 1989, 1993; Cresti 1990; Legendre and Akimova 1993).

Within GB, there is a line of research maintaining that experiencers raise at LF to the subject position (Hermon 1985; Stowell 1986; Campbell and Martin 1989; Park 1992). These proposals, although tracing a similar intuition to the one behind the present analysis, are motivated by very different considerations. In fact, the predominant motivation of Lakoff (1970), Postal (1971), Stowell (1986), Campbell and Martin (1989), and Park (1992) is the same the phenomenon of backward binding. Common to all of them is the idea that at some hidden level D-structure or LF the experiencer occupies a subject position, from which it binds the anaphor inside the theme. Yet as we have seen in section 5.3, there are strong reasons to believe that backward binding is not specific to psych constructions, nor should it be understood in purely structural terms. As to the RG literature, the main in fact, the *sole* motivation presented for analyzing object experiencers as subjects is taken from adjunct control. This is indeed an important empirical challenge, which we tackle in the next chapter. However, as I show below, the notion of LF quirkiness is superior to the RG notion of subjecthood in explaining a whole set of additional psych effects.

Most important, the present proposal is different from all its precursors in the explicit link it establishes between the *inherent case* on object experiencers and their *LF position*. Namely, it is not an accident that precisely the same experiencer arguments that manifest all the oblique properties, discussed in the first half of this monograph, also manifest the LF-subjecthood properties, to which we turn below. Both sets of properties stem from the nature of the preposition that assigns quirky case to the experiencer DP. In this respect, the present analysis offers a novel insight into these traditional puzzles.

8 Arguments for LF Quirkiness

8.1 Adjunct Control

8.1.1 The Data

There is a rich body of research within Relational Grammar (RG) dedicated to the so-called *Inversion Construction* (Perlmutter 1984; Harris 1984; Legendre 1989, 1993; Cresti 1990; Legendre and Akimova 1993). This research has produced some fairly solid crosslinguistic results, specifically as regards dative experiencers. In this chapter I summarize the results and demonstrate how they follow naturally from my proposal.

The predicates under consideration all belong to classes II and III, taking a nominative theme and a dative/accusative experiencer. The constructions under consideration all involve control into various types of nonfinite adjunct clauses. The generalizations, which obtain universally, it seems, can be stated as follows (abstracting away from RG terminology).

(169) Given a structure [. . . X . . . [$_S$ PRO . . .]], where X is a matrix argument and S is a nonfinite adjunct:
   a. X may control PRO if X is a surface subject (i.e., deep or derived).
   b. X may control PRO if X is a dative/accusative experiencer.
   c. X may *not* control PRO if X is anything else (e.g., accusative Patient, dative Goal).

This state of affairs to be illustrated below is rather curious. (169a) immediately rules out a semantic/thematic characterization of the possible controller X; there is no unique semantic role (or even a restricted set of such roles) that only surface subjects bear. The contrast between (169b) and (169c) further rules out a unified statement in terms of surface grammatical functions: Not all datives or accusatives can control, only

experiencers. Notice further that the latter need not occupy a (quirky) subject position to act as controllers; (169b) holds even in languages where accusative/dative experiencers never surface as subjects (e.g., French). Thus we face a disjunctive generalization, where the controller is grammatically specified in the first disjunct (surface subject) and thematically specified in the second one (experiencer). The RG grammarians correctly identified this as a theoretical challenge.

Before we turn to the RG account, let us illustrate the data. Perlmutter discusses Italian data involving control into four types of adjuncts: *da*+infinitive, gerunds, participial absolute, and temporal infinitives. I will only cite the facts concerning the first construction, as the four paradigms are entirely parallel. Consider the following examples.

(170) a. La mamma mi ha sgridato con tanta furia [da pentir*si*/**mi* subito].
'Mother scolded me so furiously that she/*I immediately felt remorseful.'

b. Sono stato sgridato dalla mama con tanta furia [da pentir*mi*/**si* subito].
'I was scolded by mother so furiously that I/*she immediately felt remorseful.'

c. Gli sono mancate vitamine tanto [da ammalarsi].
'He lacked vitamins to such an extent that he got sick.'

d. *Gliel'ho detto tante volte [da arrabbiarsi].
'I said it to him so many times that he got angry.'

e. *A Giorgio è stata detta la stessa cosa tante volte [da diventare matto].
'The same thing was said to Giorgio so many times that he went crazy.'
(Perlmutter 1984, (60b), (61b), (66b), (67b), (69), (63b), (65b))

(170a) shows that a standard transitive verb allows its subject, but not its object, to control the adjunct. Notice that the reflexive clitic in the adjunct, bearing person agreement, indicates unambiguously the control options. (170b) shows that the same argument that cannot control as an object *can* do so as a derived subject, upon passivization. By contrast, the demoted deep subject, now in a *by*-phrase, can no longer control. (170c) involves a class III predicate with a dative experiencer, the clitic *gli*, which indeed can control. By contrast, a dative goal, as in (170d), is not a possible controller, even when fronted to initial position (170e). This paradigm thus illustrates all the statements in (169).

Since dative experiencers may cooccur with nominative subjects, (169a b) permit either argument to be the controller. Perlmutter shows that this prediction is correct; the sentence in (171) (involving a temporal infinitive) is ambiguous as to the choice of controller (the notation with PRO is mine).

(171) Prima di partire per l'estero, Giorgio mi sembrava un po' nervoso.
'Before $PRO_{1/2}$ leaving for abroad, $Giorgio_1$ seemed a bit nervous to me_2.'

Japanese has a gerund-like construction, headed by *-nagara*, 'while, although', which exhibits the same pattern.

(172) a. Hooritu no senmon-ka de arinagara, Katoo-san wa
law.GEN expert being-while Mr. Katoo.TOP
Yamamoto-san o damasita.
Mr. Yamamoto.ACC deceived
'Though ($he_{1/*2}$ was) an expert on law, Mr. $Katoo_1$ deceived Mr. $Yamamoto_2$.'

b. Hooritu no senmon-ka de arinagara, Yamamoto-san wa
law.GEN expert being-while Mr. Yamamoto.T
Katoo-san ni damasareta.
Mr. Katoo by was-deceived
'Though ($he_{*1/2}$ was) an expert on law, Mr. $Yamamoto_2$ was deceived by Mr. $Katoo_1$.'

c. Sutoraiki o yatte inagara, roodoosya ni wa keisya no
strike.ACC doing be-while workers.DAT.TOP employer.GEN
hoo ga tadasiku omoeta.
side.NOM correct seemed
'Although $they_1$ were on strike, the employers position seemed correct to the $workers_1$.'

d. *Sono koto o kangaenagara, Tanaka-san ni denwa ga
those things.ACC think-while Mr. Tanaka.DAT phone.NOM
kakatta.
connected
'While thinking about those things, Mr. Tanaka got a phone call.'
(Perlmutter 1984, (141), (142), (144), (140))

(172a b) show that the *-nagara* construction can be controlled by a surface subject, but not by a direct object or a demoted subject. (172c d) show that a dative experiencer is a possible controller, but a dative goal is not.

Gerunds in French fall under the same generalizations (the notation with PRO is mine).

(173) a. [$PRO_{1/*2}$ ayant critiqué la politique étrangère du gouvernement], les membres de l'opposition$_1$ ont attaque leur chef$_2$.
'Having criticized the government's foreign policy, the members of the opposition attacked their leader.'

b. [$PRO_{1/*2}$ ayant cambriolé plusieuers banques dans la réfion], l'homme balafré$_1$ a été reconnu par un individu$_2$ bien connu des services de la police.
'Having robbed several banks in the area, the scarred man was recognized by a fellow well known to the police.'

c. [PRO_1 ayant trimé toute sa vie], l'oisiveté lui$_1$ répugne.
'Having slaved away all his life, he is disgusted by idleness.'

d. [$PRO_{1/2}$ quitté la Californie], nos amis$_1$ nous$_2$ manquent.
'Having left California, we miss our friends.'

e. [$PRO_{1/*2}$ s'etant remis*(e) à sortir], Marie$_1$ a envoyé une invitation à Pierre$_2$.
'Having started to go out again, Mary sent an invitation to Peter.'
(Legendre 1989, (44), (48), (50b), (51), (46))

In (173a), the matrix subject but not the object can control the gerund, while in (173b) a derived but not a demoted subject can control. (173c) shows that a dative experiencer in class III can control the gerund; when both the theme and the experiencer are animate, ambiguous control results (173d). (173e) shows that a dative goal is not a possible controller, as reflected by the participial agreement in the adjunct.[1,2]

Turning to class II predicates, a similar pattern emerges. Accusative experiencers unlike standard direct objects can control nonfinite adjuncts. We illustrate this in three different languages. Consider French first.

(174) Les soirées mondaines agacent Pierre$_1$ [avant PRO_1 même d'y avoir mis les pieds].
'Society affairs irritate Peter even before attending them.'
(Legendre 1993, (3c))

(174) should be contrasted with (173a), where object control is excluded. Next, consider control of gerundive adjuncts in Russian.

(175) a. [$PRO_{1/*2}$ soobščiv ob étom sobytii načal'stvu], $Miša_1$
reporting about this event bosses.DAT, Miša.NOM
byl arestovan sotrudnikami KGB_2.
was arrested operatives.INST KGB
'Having reported this event to the authorities, Misha was arrested by KGB operatives.'

b. [PRO_1 vojdja v komnatu], $Kolju_1$ porazil besporjadok.
entering in room, Kolya.ACC impressed mess.NOM
'Having entered the room, the mess impressed Kolya.'

c. *[PRO_1 tancuja s Olej], ego_1 pozvali k telefonu.
dancing with Olya, him.ACC asked to phone
'(While) dancing with Olya, (somebody) asked him to the phone.'
(Legendre and Akimova 1993, (11b), (21b), (9a))

(175a) shows that a surface (derived) subject can control the gerund, whereas a demoted subject cannot. (175b) shows that an accusative experiencer is also a possible controller. By contrast, (175c) shows that a standard accusative object is not a possible controller even when it is the single overt matrix argument in an impersonal construction.

Finally, consider absolute participials in Greek.

(176) a. [Akugontas $PRO_{1/*2}$ tin istoria] o $Petros_1$ arhise na
[hearing PRO the story] the Peter.NOM started to
antipathy tin $Maria_2$.
dislike the Mary.ACC
'Hearing the story, Peter started disliking Mary.'

b. [Akugontas $PRO_{1/*2}$ tin istoria] tin $Maria_2$ o $Petros_1$ arhise na tin antipathi.

c. [Akugontas PRO_1 tin istoria] o Petros arhise na tin
[hearing PRO the story] the Peter.NOM started SUBJ. cl.ACC
goitevi tin $Maria_1$.
attract the Mary.ACC
'Hearing the story, Mary started being attracted by Peter.'
(Anagnostopoulou 1999, (19a,b), pers. comm.)

(176a) shows that in a normal transitive construction (here, a class I verb), the matrix subject but not the matrix object may control the adjunct. This asymmetry is preserved even when the object is left-dislocated (176b). By contrast, an accusative experiencer is a possible controller (176c).[3] The control behavior of dative experiencers in Greek is parallel.[4]

The control paradigms in the RG literature give rise to some worries. It turns out, for example, that nearly all experiencer controllers are clitics, whereas nearly all nonexperiencer arguments that fail to control are full DPs. This confound raises the suspicion that what is diagnosed is *clitic* control, not *experiencer* control. Furthermore, virtually no minimal pairs are given, where the same adjunct is placed in both a psych and a non-psych environment.

To remove such suspicions, I have constructed a minimal paradigm in French (M. A. Friedemann, pers. comm.), which shows that the RG results are solid, despite these methodological flaws. The participle in the adjuncts below is one that displays audible agreement contrasts (masculine vs. feminine), depending on the features of PRO, which in turn depend on the features of the controller. The matrix clause always contains one masculine DP and one feminine DP. Thus, agreement on the participle forces an unambiguous choice of controller, rendering subtle interpretive distinctions unnecessary.

(177) a. [$PRO_{1/*2}$ remis sur pied], son $mari_1$ manque à $Yolande_2$.
re-put.MSC on foot, her husband misses to Yolande
'Once recovered, Yolande misses her husband.'

b. [$PRO_{*1/2}$ remise sur pied], son $mari_1$ manque à $Yolande_2$.
re-put.FEM on foot, her husband misses to Yolande
'Once recovered, Yolande misses her husband.'

(178) a. [$PRO_{1/*2}$ remis sur pied], son $mari_1$ s'adresse à $Yolande_2$.
re-put.MSC on foot, her husband addressed to Yolande
'Once recovered, her husband addressed Yolande.'

b. *[$PRO_{1/2}$ remise sur pied], son $mari_1$ s'adresse à $Yolande_2$.
re-put.FEM on foot, her husband addressed to Yolande
'Once recovered, her husband addressed Yolande.'

(179) a. [PRO_1 admis au gouvernement], son revenu a enchanté
admitted to-the government, his income has delighted
$Pierre_1$.
Pierre
'Admitted to the government, his income delighted Pierre.'

b. *[PRO_1 admis au governement], son revenu a enrichi
admitted to-the government, his income has enriched
$Pierre_1$.
Pierre
'Admitted to the government, his income enriched Pierre.'

The pattern is clear: With a class III verb, either the nominative subject (177a) or the dative experiencer (177b) may control (depending on the participial agreement in the adjunct). However, when the dative is a goal argument, only the nominative subject may control (178a b). Similarly, accusative experiencers may control (179a), but accusative nonexperiencers may not (179b).[5]

8.1.2 Analysis

The RG analysis of the control facts consists of three components. First, it is claimed that experiencers are universally initial 1s (= deep subjects). Class III predicates are analyzed as an *inversion* construction, where the initial 1 is demoted to a final 3 (= surface indirect object). Class II predicates are analyzed as an *antipassive* construction, where the initial 1 is demoted to a final 2 (= surface direct object). In both classes, the theme argument is advanced to a final 1 (from an initial 2/oblique).

(180)

	a. *Inversion (Class III)*			b. *Antipassive (Class II)*		
		Exp.	**Th.**		**Exp.**	**Th.**
Initial Stratum	P	1	2	P	1	Oblique
Intermediate Stratum	P	3	2	P	2	Oblique
Final Stratum	P	3	1	P	2	1

The second component in the analysis is the notion of a *Working 1* (Perlmutter 1984, (6)).

(181) *Working 1* (Definition)
A nominal is a *working 1* of a clause *b* iff:
a. It heads a 1-arc with tail b, and
b. It heads a final term arc with tail b.

In other words, a working 1 is any nominal that at one point in the derivation is a subject and that is a term (= 1, 2, or 3) in the final stratum. (181b) excludes a demoted subject 1-chômeur from the class of working 1s.

The third component is a control condition.[6]

(182) *Condition on Nonfinite Adjunct Control*
Only a matrix working 1 can control the adjunct.

The RG analysis meets the challenge raised by the apparent disjunctive character of adjunct control, as stated in (169). The common feature of all controllers is *subjecthood* at one point in the derivation; since experiencers

(but not goals or patients) are deep subjects, they pattern with surface subjects with respect to adjunct control. The unified account is made possible by the concept of a working 1.

As far as I know, the challenge of explaining the privileged status of experiencers as controllers was never met within GB or Minimalism with the single exception of Hermon (1985) (see below). In fact, the generalizations in (169) were not even addressed. There is an obvious reason for this unfortunate lacuna: Structural demotion (i.e., lowering) is a theoretical impossibility in most varieties of GB and Minimalism. Thus, neither inversion nor antipassive has a counterpart that can be utilized to unify experiencer objects with canonical subjects.[7] Yet, clearly, the unifying feature *must* be structural, given that no semantic characterization of the controller can do the work. But if experiencer objects are *never* subjects, then the GB/Minimalist grammarian is at a loss how to explain the facts.[8]

The present proposal offers an elegant solution to this dilemma, while keeping to the principle that structural demotion is not available in UG. It is precisely the claim that object experiencers *are* LF (quirky) subjects that distinguishes our account from most previous accounts. Suppose, as is plausible, that the adjuncts under discussion all attach at the TP level sisters to T′ or TP. Suppose further that Williams (1992) is correct in analyzing adjunct control as a case of (secondary) predication, and let us adopt the standard assumption that predication requires mutual c-command. Then the class of possible controllers of a TP-adjunct will be all and only the DPs that mutually c-command it at the relevant level. In line with the "no intermediate levels" minimalist maxim, we may take the relevant level to be the interpretive interface LF. The single A-position that mutually c-commands a TP-adjunct is [Spec,TP], the subject position. Therefore, all and only LF occupants of [Spec,TP] will be possible controllers. This correctly includes surface subjects of all kinds and LF subjects (= experiencers), and excludes any other element. Hence, we derive (169).

Thus, our account shares with the RG account some important features. Both agree that the theoretical characterization of adjunct controllers should be *structural*. Furthermore, both agree on the content of this characterization the controller must be a *subject*. Yet the two accounts differ on the relevant *level* of subjecthood: Whereas RG holds that the final stratum is not privileged, and subjecthood can be satisfied at any level, the present account requires that the controller be a subject at the

"final" level, namely LF. This contrast may be seen as a theory-internal artifact of the fact that unlike GB/Minimalism, RG is not committed to a single interpretive interface. Thus, control relations in RG can be established at any level. The observation is true, but it does not follow that there can be no empirical way of deciding between the two accounts.

The empirical extension of the RG notion "working 1" is broader than that of "LF subject." Notice that all LF subjects are working 1s, but the reverse is not true. There could be an argument that qualifies as a 1 (and a final term) for RG, but still not an LF subject for the present analysis. Indeed, *nominative objects* come closest to being such entities. The status of these arguments is not entirely clear in the RG literature. Perlmutter (1983) treats postverbal nominative arguments as final chômeurs, hence nonterms, yet Perlmutter (1984) is silent on their status. Cresti (1990) tentatively adopts the chômeur analysis, noting that it may turn out to be spurious. In any event, in order to exclude nominative objects from the class of potential adjunct controllers, RG must stipulate that they are not final 1s (despite their nominative case).

The same result follows more smoothly within recent minimalist accounts of case and agreement (Chomsky 2000, 2001). In this framework, nominative objects do not raise covertly to [Spec,TP]. Rather, an *Agree* relation is established between T^0 and the nominative argument, checking phi-features without actual movement. The scope of that argument is therefore confined to VP, and adjunct control is precluded.

Data from two languages confirm this prediction. In the Italian examples below, the quirky experiencer may control from either subject or object position. The nominative theme, however, can control only from the subject position. Although object control is somewhat marginal for the experiencer, it is entirely excluded for the theme.

(183) a. A Maria cominció a piacere la psicoterapia dopo aver
to Mary began to please the psychotherapy after having
parlato di se stessa così candidamente.
talked about herself so candidly
'Psychotherapy began to please Mary after having talked about herself so candidly.'

b. ?La psicoterapia cominció a piacere a Maria dopo aver
the psychotherapy began to please to Mary after having
parlato di se stessa così candidamente.
talked about herself so candidly

(184) a. ?La psicoterapia cominció a piacere a Maria dopo
the psychotherapy began to please to Mary after
essersi esaurita come trattamento.
being-self exhausted as treatment
'Psychotherapy began to please Mary after having exhausted itself as a treatment.'

b. *A Maria cominció a piacere la psicoterapia dopo
to Mary began to please the psychotherapy after
essersi esaurita come trattamento.
being-self exhausted as treatment
(G. Cinque, pers. comm.)

Similarly, a quirky dative subject can control in Kannada, whereas a nominative object cannot.

(185) a. [PRO$_1$ bisilinalli tirugi] sureshanige$_1$ bayarike
[PRO sun-in having-wandered] Suresha.DAT thirst
ayitu.
happened
'Having wandered in the sun, Suresha became thirsty.'

b. *[PRO$_1$ nannannu cennagi matadisi] nanage avalu$_1$ ishta
[PRO me.ACC nicely talked-to] me.DAT she.NOM liking
adalu.
became
'Having talked to me nicely, I liked her.'
(Sridhar 1979, (26a), (28b))

Thus, nominative arguments can control only when occupying a surface subject position, but quirky experiencers can control from either subject or object position. This contrast is inexplicable if subjecthood at any level is sufficient for control. Within Minimalism, the same condition that permits experiencers to control adjuncts prohibits nominative objects from doing so namely, LF subjecthood.[9] Within RG, experiencer control is explained by the assumption that experiencers are Working 1s, whereas lack of control by nominative objects is explained by the independent assumption that they are final chômeurs. The former account thus seems more economical. Ultimately, the explanatory value of each theory is proportional to the number of distinct phenomena that it reduces to the same principle or mechanism. The notion of LF quirkiness, I submit, is to be preferred over the notion of a working 1 as a theoretical construct, precisely because it accounts for a variety of psych effects in addition to adjunct control. In the next sections we turn to these effects.

The analysis of adjunct control in this section shares much of the spirit of Hermon (1985), although some important differences remain. Hermon argues that experiencers in different languages (and constructions) exhibit different clusters of subject-properties, depending on the point in the derivation where the object experiencer raises to subject position; the earlier raising occurs, the more grammatical processes will treat the experiencer as a subject. As to control, Hermon suggests that it is determined at LF. Hence, the ability of object experiencers to control adjuncts in Imbabura Quechua, Kannada, and Italian is attributed to their being LF subjects.

Several aspects of Hermon's analysis, however, are problematic. First, the option of multiple specifiers was not recognized in GB. Hence, Hermon was forced to assume that LF raising of the experiencer is possible only into an empty subject position. This implied an unaccusative analysis, much as in B&R 1988, which cannot be maintained in the general case. Hermon further predicted that if the subject position is occupied by the nominative theme, the experiencer will have no available landing site at LF and is expected to exhibit *no* subject properties. However, this is clearly false (as she mentions with respect to Italian): The data in section 8.1.1 demonstrate that surface object experiencers, occurring with surface nominative themes, systematically *can* control. Ambiguities as in (171) cannot be handled within a system that does not allow for multiple subjects.[10]

8.2 Super-Equi

The analysis of adjunct control bears directly on another domain where experiencers display a unique control behavior Super-Equi constructions. In Landau 2001 I analyze in detail the structural properties of these constructions and account for the special way in which they interact with experiencers. Most of this account can be left intact under the present analysis; however, a few assumptions must be modified. The purpose of this section is to demonstrate that the positive results of Landau 2001 persist even after those assumptions are modified. Let us start with a brief description of the relevant phenomena and generalizations.

The Super-Equi construction (first discussed and analyzed by Grinder [1970]) involves control into subject clauses, intraposed (i.e., preposed) or extraposed. Super-Equi is not as constrained as complement control, in that the controller need not be local, unique, or even grammatically expressed.

(186) a. Eric insisted that it would be ridiculous [to call for help].
b. That [covering themselves with mud] disturbed Spiro amused Dick.
(Grinder 1970, (2c), (51b))

However, control in Super-Equi is not entirely free. In Landau 2001 I show that the correct generalizations are sensitive both to the position of the nonfinite clause (intraposition or extraposition) and to the thematic nature of the matrix predicate (psych or nonpsych). The relevant contrasts are illustrated below (see Landau 2001 for extensive discussion, as well as evidence from other languages).

(187) a. Mary thought that it pleased John [PRO to speak his/*her mind].
b. Mary thought that it helped John [PRO to speak his/her mind].
c. Mary thought that [PRO to speak his/her mind] would please John.
d. Mary thought that [PRO to speak his/her mind] would help John.

In each sentence of (187), there are two potential controllers for PRO *John* or *Mary* the first of which is contained in the clause immediately dominating the infinitive, the second of which is higher up. Notice that in the structure standardly called "extraposition," *Mary* cannot control PRO in (187a), where the predicate governing the infinitive is the psych verb *please*, but can do so in (187b), where the governing predicate is the nonpsych *help* (though local control is preferred, for processing reasons). However, this contrast is neutralized when the infinitive is in subject position, as in (187c,d). This state of affairs is summarized below:

(188) a. In a structure [. . . X . . . [it Aux Pred Y [$_S$ PRO to VP]], where Y and S are arguments of Pred:
(i) If Pred is psychological, Y must control PRO.
(ii) If Pred is non-psychological, either X or Y may control PRO.
b. In a structure [. . . X . . . [$_S$ [$_S$ PRO to VP] Pred . . . Y]], either X or Y may control PRO.

Effectively, (188a-i) describes the circumstances of Obligatory Control (OC), whereas (188a-ii) describes the circumstances of Non-Obligatory Control (NOC), where long-distance (or even arbitrary) control is permitted. The ingredients of the theory of Landau 2001, which derives these generalizations, are the following.

(189) a. *The OC Generalization*
In a configuration [. . . DP_1 . . . Pred . . . [$_S$ PRO_1 . . .] . . .],
where DP controls PRO obligatorily:
If, at LF, S occupies a complement/specifier position in the VP-shell of Pred, then DP (or its trace) also occupies a complement/specifier position in that VP-shell.

b. *Extraposition*
VP-internal clauses must be peripheral at PF (here, *right*-peripheral).

c. *Chain Interpretation*
Any link in a chain may be the LF-visible link.

d. *Argument Projection*
i. Experiencer is generated above causer.
ii. Causer is generated above goal/patient/theme.

(189a) is a distributional law, assigning OC to clauses internal to the VP-shell and NOC to all others; ultimately, it derives from the fact that OC is an island-sensitive phenomenon (an instance of *Agree*, in Landau 2001). (189b) expresses the common intuition that extraposition is driven by a PF condition, which does not tolerate a clause intervening between a predicate and its internal arguments. (189c) is the null hypothesis under the view that traces of movement are full copies of the element moved (Chomsky 1995; Fox 2000). Finally, (189d) states Landau's (2001) assumptions about argument projection precisely what needs to be modified in light of the present discussion.

Consider how the system in (189) derives (188). When occurring under a psych verb, the infinitive is a causer, generated below the experiencer according to (189d-i). Being already at the right periphery of the VP, extraposition is unmotivated, hence excluded by economy. The infinitive is interpreted inside the VP, falling under OC by (189a), explaining the lack of long-distance control in (187a). Under a nonpsych verb, the infinitive is higher than its coargument DP, by (189d-ii). Extraposition is warranted by the need to comply with (189b), giving rise to a chain, each of whose links is interpretable, by (189c). If the VP-internal base position is interpreted, we get OC; if the extraposed, VP-external position is interpreted, we get NOC, sanctioned by (189a). Hence the possibility of long-distance control in (187b). Intraposed infinitives, as in (187c,d), are interpreted in the EPP/subject position, which is obviously outside VP. Hence, regardless of the nature of the matrix verb, NOC is allowed. Landau (2001) shows that PRO in NOC infinitives is a logophor of sorts,

rather than a pronoun (parallel to *picture*-anaphora), whose reference is partially determined by discourse factors. This fact will be of some relevance below.

The crucial evidence for the extraposition analysis comes from systematic correlations between control and extraction. Since displaced (adjoined) clauses are known to block extraction, we predict a correlation of this property with NOC. Conversely, OC infinitives (which are interpreted in situ) are expected to be transparent. The following paradigm confirms this prediction (see Landau 2001 for additional tests, using WCO and Condition C).

(190) a. It would kill the workers$_1$ [PRO$_1$ to build this dam].
b. What$_2$ would it kill the workers$_1$ [PRO$_1$ to build t$_2$]?
c. It would kill the forest [PRO$_{arb}$ to build this dam].
d. *What$_2$ would it kill the forest [PRO$_{arb}$ to build t$_2$]?

Consider now the implications of the present analysis. The system in (189) can be carried over in toto except for (189d-i). Recall that we have motivated two different structures for ObjExp verbs: In stative verbs, the experiencer is indeed the higher argument in the VP shell, yet eventive ones merge the causer as an external argument, above the experiencer. The account of Landau (2001) thus covers only the stative verbs. Eventive psych verbs are essentially equivalent to nonpsych verbs, falling under (189d-ii), insofar as their infinitival argument is not peripheral, and hence it must extrapose. Yet the brute fact is that NOC is impossible under a psych verb *any* psych verb, eventives included.

(191) a. It helped John$_1$ [PRO$_{arb}$ to praise him$_1$].
b. *It amused John$_1$ [PRO$_{arb}$ to praise him$_1$].

Since OC is forced in (191b), Condition B is violated, unlike the nonpsych case (191a), where PRO can be arbitrary. Suppose we choose to interpret the extraposed copy of the infinitive in both cases; then we have the following representations.

(192) a. It [$_{vP}$ [$_{vP}$ ~~[PRO$_{arb}$ to praise him$_1$]$_2$~~ helped+v [$_{VP}$ t$_V$ John$_1$]] [PRO$_{arb}$ to praise him$_1$]$_2$]
b. *It [$_{vP}$ [$_{vP}$ ~~[PRO$_{arb}$ to praise him$_1$]$_2$~~ amused+v [$_{VP}$ t$_V$ John$_1$]] [PRO$_{arb}$ to praise him$_1$]$_2$]

Our problem now is to explain why the same extraposition that licenses NOC in (192a) does not do so in (192b).

In fact, the present analysis already provides an answer to this question: Although (192a,b) are equivalent as far as the infinitive's position is

concerned, they are not equivalent with respect to the *controller's* position. Given the claim that experiencers raise at LF to the subject position, *John* occupies its ultimate scope position in (192a) but not in (192b). The proper LF representations are as follows.

(193) a. $[_{TP}$ It $[_{vP}$ $[_{vP}$ t_2 helped+v $[_{VP}$ t_V John$_1$]] [PRO$_{arb}$ to praise him$_1$]$_2$]]
b. *$[_{TP}$ John$_1$ $[_{TP}$ it $[_{vP}$ $[_{vP}$ t_2 amused+v $[_{VP}$ t_V t_1]] [PRO$_{arb}$ to praise him$_1$]$_2$]]]

In (193b), extraposition has not removed the infinitive from the c-command domain of the experiencer, since the latter has raised yet higher, to the subject position. In the framework of Landau (2001), this fact would have been irrelevant, as the possibility of NOC arose whenever the infinitive was VP-external; no structural constraints on the choice of controller in NOC were explored in that study, since NOC was assimilated to logophoric dependence. Yet, it is probably the case that logophoric dependence is not entirely indifferent to structure (see Zribi-Hertz 1989 for some evidence). Taking our clue from *picture*-anaphora, notice that a clausemate subject is an obligatory antecedent, but beyond the immediate clause no particular choice is forced.

(194) a. [John$_2$ thought [that Bill$_1$ disliked many pictures of himself$_{1/*2}$]].
b. [John$_2$ thought [that Bill$_1$ said [that many pictures of himself$_{1/2}$ were found in the attic]]].

With this restriction on logophors in mind, we may conclude that the controller of PRO in (193b) must be the LF subject *John*, clausemate to the infinitive, even though this is, in principle, a NOC configuration. Since the reading obtained by extraposition in a psych context is indistinguishable from the reading obtained without it — in both cases we get local control by the experiencer — there is in fact no way to determine whether structures like (193b) actually exist: The LF copy of the infinitive could be uniformly the base copy, explaining the transparency property illustrated in (190b).[11] At any rate, the results of Landau (2001) can be fully subsumed under the present analysis, and they provide independent evidence for the special scopal properties of object experiencers.

8.3 Functional Readings

Kim and Larson (1989) noticed that *wh*-quantifier interactions are sensitive to psych contexts. The standard observation, due to May (1985), is

that an object question with a subject quantifier (195a) allows a pair-list reading, answered by (195c), but a subject question with an object quantifier (195b) does not, admitting only a single answer (195d).

(195) a. What did everyone bring?
b. Who brought everything?
c. John brought the wine, Bill brought the flowers, Mary brought some cheese, ...
d. John did.

However, according to Kim and Larson, the judgments are reversed with object experiencer verbs.

(196) a. What worries everyone?
b. Who does everything worry?

Kim and Larson claim that the subject question (196a) is ambiguous, allowing a pair-list reading, while the object question (196b) is unambiguous, allowing only a single answer. They note, however, that the latter judgment is more variable, and when the subject quantifier is animate, a pair-list reading marginally reemerges. In fact, Chierchia (1992) shows that psych effects are restricted to subject questions, rendering them ambiguous (as opposed to nonpsych subject questions), while leaving intact the ambiguity of object questions (attested in nonpsych contexts as well):[12]

(197) a. Who does every conference worry the most?
b. NELS worries Bill, WCCFL worries Mary, ...
(Chierchia 1992, (93))

I will assume that Chierchia's description is correct; the puzzle to be explained is the ambiguity of (196a) versus the nonambiguity of (195b). I will also assume that Chierchia's basic insight is correct, and pair-list readings arise from "functional readings" of *wh*-questions. The idea is that on the pair-list reading of (198a), what is being asked for is a (Skolem) function, associating patients with psychiatrists. This function can be specified intensionally, as in (198b), or extensionally, as in (198c). This view nicely explains why pair-list readings are possible only when functional readings are (cf. (199)):

(198) a. Who does every patient adore?
b. His psychiatrist.
c. John adores Prof. Jung, Mary adores Prof. Klein, ...

(199) a. Who adores every psychiatrist?
b. *His patient.
c. *John adores Prof. Jung, Mary adores Prof. Klein, ...

The reason that a functional reading is OK in (198) but not in (199), Chierchia argues, is the same reason that underlies the contrast in (200), namely, Weak Crossover.

(200) a. Every patient$_1$ adores his$_1$ psychiatrist.
b. *His$_1$ patient adores every psychiatrist$_1$.

However, for the analogy to be explanatory, one has to identify in (198a)/(199a) the counterpart of the bound pronoun that is c-commanded by the QR-trace in (200a) but not in (200b). Chierchia argues that such a counterpart exists, in the form of an implicit variable inside the (complex) *wh*-trace. The index of the *wh*-trace denotes the Skolem function, while the index of the implicit variable denotes the argument to which it applies. (198a) and (199a) would be represented at LF as follows (t_1 = QR-trace, t_2 = *wh*-trace, e_1 = implicit variable).

(201) a. [$_{CP}$ Who$_2$ does [$_{TP}$ every patient$_1$ [$_{TP}$ t_1 [$_{VP}$ adore [t_2 e_1]$_2$]]]]?
b. *[$_{CP}$ Who$_2$ [$_{TP}$ every psychiatrist$_1$ [$_{TP}$ [t_2 e_1]$_2$ [$_{VP}$ adores t_1]]]]?

The application of WCO to these configuration is straightforward.

(202) At LF, the trace of the [quantified] NP has to c-command the trace of the *wh*-word for a list reading to be possible. (Chierchia 1992, 182)

It is easy to verify that (201a) satisfies (202) whereas (201b) does not.

Back to psych verbs. Chierchia shows that given B&R's (1988) unaccusative structure for psych verbs, this analysis predicts that both (196a,b) will be ambiguous. I will not go through the details, but simply show that the present analysis makes the same prediction. Recall that we have good reasons to reject B&R's structures for nonstative class II verbs. Therefore, the challenge is to demonstrate that both the transitive and the unaccusative derivations in (168) satisfy (202).[13]

Consider the pair in (203), where eventive interpretation is forced by the progressive aspect. The psych effect obtains, and (203a) admits a pair-list reading just like (203b).

(203) a. Which puppet is scaring every kid?
b. Which kid is every puppet scaring?

Incorporating Chierchia's proposal into the present analysis, these sentences are assigned the following LF representations.

(204) a. [$_{CP}$ Which puppet$_2$ [$_{TP}$ every kid$_1$ [$_{TP}$ t$_1$ [$_{TP}$ [t$_2$ e$_1$]$_2$ is [$_{vP}$ [t$_2$ e$_1$]$_2$ [$_{v'}$ v [$_{VP}$ scaring t$_1$]]]]]]]?

b. [$_{CP}$ Which kid$_2$ is [$_{TP}$ every puppet$_1$ [$_{TP}$ [t$_2$ e$_1$]$_2$ [$_{TP}$ t$_1$ [$_{vP}$ t$_1$ [$_{v'}$ v [$_{VP}$ scaring [t$_2$ e$_1$]$_2$]]]]]]]?

In (204a), the *wh*-theme raises to [Spec,CP] through an intermediate A-position the first [Spec,TP] where EPP is satisfied. QR of the experiencer leaves a variable in an intermediate A-position the second [Spec,TP], where the [loc] feature is interpreted. Recall that we assume that two specifiers of the same head are in a mutual c-command relation. Hence, the higher t$_1$ c-commands e$_1$, in conformity with (202). In (204b), the *wh*-experiencer raises to [Spec,CP] through an intermediate A-position the second [Spec,TP] again, where the [loc] feature is interpreted. QR of the theme leaves a variable in the first [Spec,TP], where EPP is satisfied. Again, t$_1$ c-commands e$_1$. We correctly derive the ambiguity of both sentences.[14]

Observe now that *without* LF-movement of the experiencer to the (second) subject position, (203a) is incorrectly predicted to lack a pair-list reading.

(205) [$_{CP}$ Which puppet$_2$ [$_{TP}$ every kid$_1$ [$_{TP}$ [t$_2$ e$_1$]$_2$ is [$_{vP}$ [t$_2$ e$_1$]$_2$ [$_{v'}$ v [$_{VP}$ scaring t$_1$]]]]]]?

Here, the QR-trace t$_1$ does *not* c-command the *wh*-trace. Chierchia's analysis would predict a WCO violation here contrary to fact. Of course, Chierchia handles these cases by assuming an unaccusative derivation à-la B&R. Thus, Chierchia's analysis of functional readings, which is independently motivated, can account for the psych effect only by recourse to some "special" syntax of psych verbs: either the unaccusative analysis or the present analysis (LF quirkiness). But we have plenty of evidence that the former is untenable for eventive class II verbs, which *do* allow a pair-list reading in subject questions (203a). This means that the "special" syntax involved must be the one advocated here. Thus, we have an argument from functional readings in favor of LF quirkiness of object experiencers.

8.4 Forward Binding

In section 3.6 we noted that in contrast with the strictly ungrammatical cases of *se*/*si* reflexives, binding of full reflexives in class II is judged less severe. In fact, the status of these examples is not entirely sharp, although their marginality appears to be universal.

(206) a. *?Gianni preoccupa se stesso. (Italian)
Gianni worries himself.
(B&R 1988, (14b))

b. *Marie intrigeerde zichzelf. (Dutch)
Mary intrigues herself.
(Grimshaw 1990, 184, n. 4, by M. Everaert)

c. ??Pekka inho/sure-tta-a itseaan. (Finnish)
Pekka disgust/sad-CAUS-3sg. self.PART
'Pekka disgusts/saddens himself.'
(McGinnis 2000a, n. 13, by L. Pylkkänen)

d. ?Politicians depress/worry each other.
(Grimshaw 1990, 158, (14b))

e. *?They frighten themselves.
(Bouchard 1992, (6a))

f. *The men concern each other.
(Johnson 1992, (8a))

The relevant factor, it seems, is stativity; the more stative the psych verb is, the worse forward binding becomes. Although the generalization is rarely stated in these terms (but see Stroik 1996), this intuition is shared by most linguists who studied this phenomenon.[15]

It is important to realize that unlike the psych effects in chapter 3, but like the passive test in section 4.1, forward binding is not sensitive to *agentivity* per se. Thus, it is possible in eventive nonagentive contexts, but not in stative ones.

(207) a. John and Mary accidentally startled each other in the dark.
b. *John and Mary rather concerned each other in their youth.

The same point can be illustrated in Hebrew, with the verb *hitrid*, which is ambiguous between 'harass' and 'bother'. Notice that the first reading is agentive, the second stative (in Hebrew, not in English).

(208) Gil hitrid et Rina.
Gil *hitrid* ACC Rina
'Gil harassed Rina.'/'Gil bothered Rina.'

A convenient way to single out the stative reading is to add the modifier *dey*, 'rather' (see Iwata 1995). As one can see below, this modifier is incompatible with an agentive adverb.

(209) a. Gil dey hitrid et Rina (*be-xavana).
Gil rather *hitrid* ACC Rina (*deliberately)
'Gil rather bothered Rina.'

b. Gil (*dey) hitrid et Rina be-xavana.
Gil (*rather) *hitrid* ACC Rina deliberately
'Gil (*rather) harassed Rina deliberately.'

Indeed, anaphor binding precludes the stative modifier, as in (207b).

(210) Gil ve-Rina (*dey) hitridu exad et ha-šeni.
Gil and-Rina (*rather) *hitridu* one ACC the-second
'Gil and Rina harassed each other.'/*Gil and Rina rather bothered each other.'

That forward binding in psych constructions is sensitive to the stativity of the psych predicate is further supported by considering psych adjectives. Being unambiguously stative, they give rise to sharper binding violations than ordinary class II verbs. The facts were first noted by Postal (1971, 47).

(211) a. *I am disgusting to myself.
b. *I am loathsome to myself.
c. *I looked funny to myself.

The overall pattern classifies forward binding together with passivization as a "*stative* psych effect," rather than a general psych effect of the sort displayed in clitic doubling, resumptive pronouns, *si*/*se*-reflexives, and the like. Here as well, I will argue that unaccusativity is the underlying source. But first, let us consider existing proposals.

As far as I am aware, the phenomenon has received very little attention. As mentioned above, B&R (1988) assimilate it to *si*-reflexives, both effects falling under the Chain Condition. This is problematic (as Grimshaw [1990] observed) because of the different status of the examples. Moreover, we can now put forth a stronger objection against a unified treatment: Whereas *si*-reflexives are ruled out with all nonagentive psych verbs, including eventive ones, full reflexives are licensed in eventive contexts. Clearly, a unified approach is inappropriate here.

The main existing alternative is the one offered by Grimshaw (1990) herself, later elaborated by Bouchard (1992, 1995) (see also Iwata 1995). Grimshaw's proposal can be summarized as follows.

(212) *Grimshaw's Account*
a. Under the nonagentive reading, the theme subject does not denote an individual but rather properties of individual a distinct semantic type.
b. Anaphors always denote individuals.

c. Binding requires type-matching between the binder and the bindee.
d. Hence, forward binding is excluded in nonagentive class II verbs.

An immediate correction to this account is empirical the relevant restriction on the effect is eventiveness, not agentivity. So let us substitute "eventive" for "agentive" in (212) and consider whether the revised version is adequate.

The intuition behind (212a) is that examples like *John annoys me* or *Mary depresses me* can often be paraphrased as *John's behavior annoys me, Mary's condition depresses me*. Although clear enough, it is less clear that this intuitive distinction corresponds to a formal distinction between properties and individuals. Notice that sentences like (213a) admit a variety of context-dependent interpretations (213b,c).

(213) a. *John disgusts Mary*.
b. John's gaudiness disgusts Mary.
c. John's fingers disgust Mary.
d. John's gaudiness displayed itself to everyone.
e. John's fingers pointed at each other.

Whereas *gaudiness* is a property, *fingers* are not. Yet both can bind anaphors (213d,e), suggesting that the notion of "property," if relevant at all to binding theory, departs from common sense. Obviously, one could argue that *fingers* is a property in (213c) but an individual in (213e); and one could argue that the anaphor is a property in (213d) but an individual in (206). But that would leave us with no noncircular way of establishing whether any given DP qualifies as an individual or as a property.[16]

Bouchard (1995) explains the data in (206) by the Novelty Condition of Wasow (1972), which requires the reference of an anaphoric element to be no more determinate than the reference of its antecedent. According to Bouchard, the theme subject of a nonagentive psych verb denotes a "Concept" defined as an entity viewed externally whereas the experiencer object is a "Substantive" an entity viewed internally, as a participant in an event. Reference as a Concept is said to be "more limitative" than reference as a Substantive; hence the latter cannot be bound by the former.

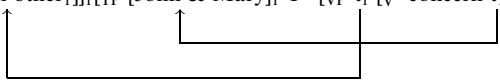
Again, I would argue that the operative categories in this account "Concept" and "Substantive" are no more solid than "individual" and "property" in Grimshaw's account. One does not have pretheoretical intuitions about these notions; for example, I fail to see why reference as a Concept is less determinate than reference as a Substantive (we know

that this assumption gives the right result, but we do not know why). Moreover, it would seem that indirect reference (through reference shift) is less determinate than direct reference. The Novelty Condition would incorrectly rule out examples like (ii) in n. 16 (this chap.), where the antecedent is shifted but the anaphor is not.

Let us turn now to a solution made possible within the present system. We assume the correctness of (96b), namely, stative class II verbs are unaccusative. Given the LF quirkiness hypothesis, a sentence like (214a) will be assigned the LF in (214b).

(214) a. *John and Mary concern each other.

b. $[_{TP}\ [_{PP}\ \varnothing_{\psi}\ [_{DP}\ \text{each other}_1]]_1 [_{TP}\ [\text{John \& Mary}]_1\ T^0\ [_{VP}\ t_1\ [_{V'}\ \text{concern}\ t_1]]]]$



The T/SM *John and Mary* moves overtly from the VP-complement position to the first [Spec,TP], and the experiencer *each other* moves covertly from [Spec,VP] to the second [Spec,TP]. Recall that we assume that two specifiers of the same head mutually c-command each other. This allows the R-expression in the first [Spec,TP] to bind the anaphor in the second [Spec,TP] at LF, in conformity with Condition A, but crucially, the latter also binds the former, in violation of Condition C. For both conditions to be satisfied, the anaphor must reconstruct to its base position. Crucially, though, the R-expression must not reconstruct, since its base position is lower than the anaphor's. In short, if neither the R-expression nor the anaphor is reconstructed, and both are interpreted in their high positions, Condition C is violated. If the R-expression reconstructs, the structure violates both conditions A and C. The only grammatical output results from reconstruction of the anaphor and no reconstruction of the R-expression.

Suppose, however, that such an option is unavailable when the two elements are coindexed and occupy the specifiers of the same head. In other words, suppose the following is a true constraint on reconstruction.

(215) There is no "partial" reconstruction of coindexed cospecifiers.

The rationale behind (215) is very simple. We view reconstruction as nothing but an instruction to the LF component to interpret the lower copy in a chain (Chomsky 1995; Fox 2000). This procedure involves at least two steps: (i) identifying the higher link in the chain; (ii) "striking out" the semantic content of the higher link. Consider step (i). How are chain links to be identified? The identity of a chain link consists of two

features its structural position and its index. In the normal case, no two chain links in a given LF will be identical on both features. However, in the rare case exemplified by (214b), the coindexed cospecifiers of T are indistinguishable both structurally and indexically. The result is that step (i) above treats them as one unit, and consequently, step (ii) applies to both of them. Thus, if one specifier reconstructs, the other one must do so too. In the context of (214b), this implies that the only LF representation that satisfies both conditions A and C is underivable.[17]

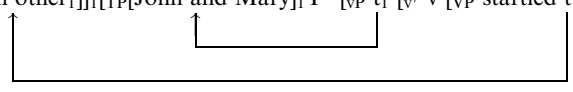
Recall that in Romance languages, the status of binding with full reflexives was not as severe as that of *si*-reflexives; indeed, this was a problem for B&R (1988).

(216) a. *Gianni si preoccupa.
Gianni himself worries
b. *?Gianni preoccupa se stesso.
Gianni worries himself.
(B&R 1988, (10b), (14b))

There is a natural account for this distinction in the present analysis. The violation in (216a) is essentially morphological: *Si* is used to absorb oblique case, an absolute impossibility in Romance languages (see section 3.6). The violation in (216b), on the other hand, results from an unaccusative derivation, which in turn depends on the stativity of specific psych verbs. Stativity, however, is a gradient notion, not an all-or-nothing property (see also Tenny 1998): Some psych verbs are exclusively stative (*concern*), others are neutral between stative and eventive readings (*frighten*), and others strongly favor the eventive reading (*startle*). Thus, the acceptability of forward binding with psych verbs will be inversely proportionate to their intrinsic stativity, and the distribution of judgments found in (206) is to be expected. In fact, a similar variation is found with verbal psych passives, which are also acceptable only under eventive readings (see section 4.1). This converging similarity is a positive result of the present analysis.

As opposed to stative class II verbs, eventive ones involve a causer argument, which is generated externally.

(217) a. John and Mary startled each other.
b. $[_{TP}[_{PP}\ \varnothing_{\psi}\ [_{DP}\ \text{each other}_1]]_1[_{TP}[\text{John and Mary}]_1 T^0\ [_{vP}\ t_1\ [_{v'}\ v\ [_{VP}\ \text{startled}\ t_1]]]]]]$



Again, the anaphor must reconstruct in order for the R-expression to escape a Condition C violation. In contrast to (214b), however, reconstruction of the R-expression in (217b) will not interfere with Condition A, as its base position is higher than the anaphor's. Thus, both specifiers of T can reconstruct, in accordance with condition (215), and the binding conditions will be satisfied at the base positions. The structural difference between (214b) and (217b) explains why forward binding is possible with eventive but not with stative class II verbs.[18]

This analysis makes a novel prediction. Suppose it is the *experiencer* argument that raises overtly to [Spec,TP], rather than the causer or T/SM argument. This option, recall, is manifested in languages with surface quirky subjects. What are the predictions with respect to anaphor binding? Let us consider the relevant LF structures.

(218) a. $[_{TP}\ [_{PP}\ \varnothing_{\psi}\ [_{DP}\ DP_{Exp}]]_1\ T^0\ [_{VP}\ t_1\ [_{V'}\ V_{Stative}\ [Anaphor_{T/SM}]_1]]]$
b. $[_{TP}\ [_{PP}\ \varnothing_{\psi}\ [_{DP}\ DP_{Exp}]]_1\ T^0\ [_{vP}\ [Anaphor_{Causer}]_1\ [_{v'}\ v\ [_{VP}\ V_{Eventive}\ t_1]]]]$

Here, only one (nontrivial) chain is formed, since the theme (causer or T/SM) does not raise covertly to [Spec,TP]; LF quirkiness is a specific property of experiencers. In the unaccusative (stative) case (218a), the experiencer asymmetrically binds the anaphor either from its surface position or from its base position; reconstruction is not forced by any binding condition. In the eventive case (218b), the experiencer asymmetrically binds the causer from its surface position but not from its base position; reconstruction is blocked. Both options, then, should license forward binding.

Greek, which has dative and accusative experiencer subjects, confirms this prediction.

(219) a. Tis Marias tis aresi o eaftos tis.
the Mary.DAT cl.DAT likes the self.NOM her
'Mary likes herself.' (Lit. 'To Mary appeals herself.')
b. Tin Maria tin provlimatizi/enoxli/anisihi o eaftos
the Mary.ACC cl.ACC puzzles/bothers/worries the self.NOM
tis.
her
'Maria is puzzled/bothered/worried with/at/by herself.'
(Anagnostopoulou 1999, (15a), (22a))

Crucially, the counterparts of (206) in Greek, with a nominative theme *in the subject position* binding the object experiencer, are still bad (E. Anagnostopoulou, pers. comm.).[19]

(220) a. *I Maria tu aresi tu eaftu tis.
the Mary.NOM cl.DAT likes the self.DAT her
'Mary appeals to herself.'
b. ?*I Maria ton anisixi/enoxli/provlimatizi ton eafto
the Mary.NOM cl.ACC worries/bothers/puzzles the self.ACC
tis.
her
'Mary worries herself.'

A similar contrast is found in Kannada, a language where dative subjects are ubiquitous. A dative experiencer can bind a nominative theme, but not be bound by it (notice than in both examples, the anaphor precedes the antecedent, so word order is irrelevant).

(221) a. tanu somanige tumba ishta.
self.NOM Soma.DAT much liking
'Soma is very fond of himself.'
b. *tanage somanu tumba ishta.
self.DAT Soma.NOM much liking
'Soma is very fond of himself.'
(Sridher 1979, (21a), (20))

The contrast between (219) and (220), and between (221a) and (221b), proves that the proper treatment of forward binding with psych verbs should be structural rather than semantic. Notice that in each pair, the two examples are semantically equivalent, and furthermore, they have identical surface structures. One must appeal to some "hidden" structure in order to make sense of this contrast. Our analysis associates (219)/(221a) with the structures in (218) and (220)/(221b) with structure (214b), explaining this pattern. By contrast, Grimshaw's account (212), which relies on the symmetrical notion of "type mismatch," fails to distinguish the good cases from the bad ones, as the anaphor and its antecedent always belong to different semantic types. Thus, Grimshaw would predict *all* these examples to be bad.[20]

9 LF Quirkiness Is LF Locative Inversion

It is time to address the *why*-question, carefully skirted so far: Why are object experiencers quirky; why do they raise to the subject position? The idea I would like to pursue follows the basic insight that was laid out at the outset of this monograph: Experiencers are mental locations. Ample crosslinguistic evidence suggests that this is not a mere metaphor, but rather a strong claim about their syntax. In particular, object experiencers are locative PPs. As such, they display a variety of properties commonly associated with locative PPs in contexts as diverse as clitic doubling, resumptive pronouns, island phenomena and reflexivization. The claim I now make is that the property hitherto called LF quirkiness namely, the fact that object experiencers raise to subject position at LF reduces to yet another construction that singles out locative PPs: the locative inversion construction. If tenable, this unification will demonstrate the remarkable efficacy of the basic thesis of this monograph.

9.1 Locative Inversion and Experiencers

In locative inversion, a locative PP and a subject DP switch positions.

(222) a. My friend Rose was sitting among the guests.
b. Among the guests was sitting my friend Rose.
(Bresnan 1994, (2))

There are strong reasons to believe that the preverbal PP in (222b) is a subject at some level of representation, though not necessarily at surface structure (Stowell 1981; Levin 1986; Coopmans 1989; Bresnan and Kanerva 1989; Hoekstra and Mulder 1990; Bresnan 1994; Levin and Rappaport 1995; Collins 1997). Moreover, these studies show that the preverbal PP is a *derived* subject. I will not reproduce the arguments

here, but simply assume that their conclusion is correct: In many languages, locative PPs raise overtly to [Spec,TP].

The analogy to psych constructions proceeds in two steps. First, I argue that the word order alternation discussed above in languages with quirky experiencers is a straightforward extension of the alternation in (222).

(223) a. Ton Petro ton endhiaferun ta mathimatika. (Greek)
the Peter.ACC cl.ACC interest the mathematics.NOM
'Mathematics interests Peter.'
b. Ta mathimatika ton endhiaferun ton Petro.
(Anagnostopoulou 1999, (16))

That is, the "experiencer-inversion" in (223a) is but an instantiation of the locative inversion rule seen in (222b). Second, in languages without overt quirky experiencers, a parallel inversion nonetheless applies at LF, where the "locative" experiencer raises to the second [Spec,TP], as depicted below for statives and eventives.

(224) a. $[_{TP}\ [_{PP}\ \varnothing_{\psi}\ [_{DP}\ \text{Mary}]]_1\ [_{TP}\ [\text{global warming}]_2\ T^0\ [_{VP}\ t_1\ [_{V'}\ \text{concerns}\ t_2]]]]$
b. $[_{TP}\ [_{PP}\ \varnothing_{\psi}\ [_{DP}\ \text{Mary}]]_1\ [_{TP}\ [\text{the noise}]_2\ T^0\ [_{vP}\ t_2\ [_{v'}\ v\ [_{VP}\ \text{startled}\ t_1]]]]]$

What is the common denominator of locative inversion and experiencer inversion? As suggested above, this is the [loc] feature residing on the head of the locative/experiencer PP. Proper interpretation of this feature (i.e., assigning a value to its spatial referents) requires a local relation with T. This relation, I have argued, can be established either overtly or covertly. This is how the locative analysis of experiencers, coupled with the operation of locative inversion, explains the LF subjecthood of experiencers.

The question of what drives locative inversion has received some attention in recent work. Collins (1997, 28) ties the phenomenon to the EPP, analyzing locative inversion as a kind of pied-piping, where the attracted feature is really the D-feature of the prepositional object (in analogy to *wh*-pied-piping, e.g., *With whom did you speak*?). Alternatively, one could widen the set of features that may satisfy the EPP feature of T, to include not only D but any categorial feature. Notice that the latter option seriously overgenerates, failing to exclude locative inversion with any arbitrary XP in [Spec,TP]. The former option also overgenerates in that it does not distinguish PPs that are eligible for locative inversion from those that are not (e.g., instrumentals, benefactives).

In contrast, linking locative inversion to a [loc] feature on the inverted PP is restrictive enough to exclude the process with nonlocative PPs and at the same time is inclusive enough to generalize to experiencer objects on the crucial assumption that these are concealed locatives.

Still, I believe that there is something to the intuition that the EPP itself is related to locative inversion. At this point, unfortunately, I cannot offer much beyond speculation. Following traditional wisdom, it is natural to take the EPP as the technical execution of the (interface-driven) topic-comment predication relation. This relation is conceived as the introduction of relatively less familiar information into a more familiar scene. Notice that this common rendering, using the term "scene," already hints at the locative nature inherent in the topic-comment relation: The topic is a "location," in a fairly abstract sense, in which the comment is situated. Plausibly, this is an instance of the general cognitive split between figure and ground. Under this view, it is not an accident that in many languages the expletive pronoun is derived from a locative; and it is equally unsurprising that locative PPs, but not, say, instrumentals, are inverted into a position associated with the unmarked topic.

It is important to realize, though, that the EPP has been traditionally associated with two distinct types of requirements. The first one is semantic, corresponding to the considerations just mentioned. The second one is phonological, expressing a parametric property of T (and by analogy, any other functional head); the property that allows null subjects in Italian, requires single subjects in English, and allows multiple subjects in Japanese. The relation between these two types of requirements is indirect at best; the choice to lump them together under one label the EPP is unfortunate. For this reason, I will continue to assume that T is associated with both a semantic "criterion" (in the sense of Rizzi 2006) and a phonological one, the latter subject to various parametric conditions (e.g., (166)). How to correlate these requirements is an issue I must set aside (see Landau 2007, for pertinent discussion).

9.2 Why Does Experiencer Raising Not Look Like Locative Inversion?

The appeal of the idea that object experiencers raise to subject position as part of the generalized phenomenon of locative inversion is clear enough. First, it explains the clausal scope of experiencers, even when overtly occupying object positions. Second, it fits tightly with a mass of independent evidence showing that object experiencers pattern with locative arguments in many other respects.

However, the vast literature on locative inversion has unearthed many peculiar restrictions on the construction that are not shared by psych constructions. For our proposal to be convincing, these differences must be traceable to independent reasons. In this section I show that once we properly identify the specific features of English locative inversion, we will be in a position to understand why it is subject to more restrictions than standard psych constructions, despite their nearly identical LF representations.

A first potential worry concerns the fact that after all, experiencers denote locations only in an extended, metaphorical sense of the word. Why should they be considered locatives for the purposes of locative inversion? The issue, however, is empirical: Locative inversion also applies to "extended" locatives. For example, the verbs *occur*/*happen* are found in locative inversions where the preverbal phrase is a temporal PP; and the verbs *come*/*go* can take comitative *with*-PPs in locative inversion (Levin and Rappaport 1995, 301, n. 1).

(225) a. During the first two decades of the twentieth century occurred the most significant breakthroughs of modern physics.
b. With the inspector came a strange-looking man, wearing a gray coat and holding a large briefcase in his left hand.

Thus, the mere fact that experiencers are "extended" locations should not exclude them from locative inversion, which does apply to other extended locatives. It seems that the precise delineation of the class of inverted locatives cannot be established in advance of empirical study.

Locative inversion has universal as well as language-specific aspects. One universal is stated in (226a), and one particular in (226b).

(226) a. Locative inversion induces presentational focus on the postverbal DP.
b. In English, the inverted locative is a topicalized subject.

The discourse function (226a) explains certain semantic restrictions.

(227) *Discourse-related restrictions on English locative inversion*
a. The verb must be "informationally light."
b. Clausal negation is disallowed.

Consider (227a) first. It has been frequently argued that locative inversion is only possible with passive or unaccusative verbs (Levin 1986; Coopmans 1989; Bresnan and Kanerva 1989; Hoekstra and Mulder 1990; Bresnan 1994). If true, this would constitute an obstacle to assimilating the unergative (eventive) structure (224b) to locative inversion.

However, drawing on an extensive corpus study, Levin and Rappaport (1995) convincingly dispel this misconception. Although unaccusative verbs are very frequent in locative inversions, many unergatives are possible as well. To give just a small sample, locative inversion can host activity verbs (228a), verbs of emission (228b), verbs of bodily motion (228c), and even adjectival passives (228d).[1]

(228) a. On the third floor worked two young women called Maryanne Thomson and Ava Brent, who ran the audio library and print room.
b. On the folds of his spotless white clothing, above his left breast, glittered an enormous jewel.
c. ... and in this lacey leafage fluttered a number of gray birds with black and white stripes and long tails.
d. He wears a silver ring he bought in Egypt it cost all of forty cents, he told me and on it are engraved three pyramids.
(Levin and Rappaport 1995, chap. 6, (19b), (21c), (26), (61b))

Levin and Rappaport argue that the key to an understanding of the restrictions on verb classes in locative inversion is to be found in the discourse function of the construction. The basic idea is that the verb must be "informationally light" in the context, in the sense that it should convey hardly anything beyond the existence or appearance on the scene of the postverbal NP. The evidence for this comes from disambiguation effects that locative inversion has on some verbs (essentially "bleaching" their meaning), as well as the exclusion of other verb classes, like certain change-of-state verbs. The latter point will play a prominent role in the next section, so it merits discussion.

While the examples in (228) demonstrate that unaccusativity is not a necessary condition on verbs occurring in locative inversion, the examples in (229) demonstrate that neither is it sufficient.

(229) a. *On the top floor of the skyscraper broke many windows.
b. *On the streets of Chicago melted a lot of snow.
c. *On backyard clothlines dried the weekly washing.
(Levin and Rappaport 1995, chap. 6, (18))

Levin and Rappaport explain the exclusion of these verbs from locative inversion as follows: "Externally caused verbs of change of state are not informationally light: By predicating an externally caused, and therefore unpredictable, change of state of their argument, these verbs themselves contribute discourse-new information and hence are not eligible for the construction" (1995, 233). Levin and Rappaport further contrast

externally caused change-of-state (ECCS) verbs with internally caused change-of-state verbs (ICCS). The latter category does appear in locative inversion.

(230) a. In the garden may bloom the Christmas plant . . .
b. Next door, to the east, decays Ablett Village . . .
(Levin and Rappaport 1995, chap. 6, (36))

To explain the felicity of (230), Levin and Rappaport appeal to two independent considerations. First, they say that unlike ECCS verbs, which predicate an unpredictable change of state of their argument, ICCS verbs describe predictable processes. In their words: "flowers bloom and old wood decays in the natural course of events, but it is only incidental that glass breaks or that a door opens" (1995, 235). Then, however, Levin and Rappaport note that even ICCS verbs are found in locative inversion only on their stative sense, not on their change of state sense, as illustrated below for *grow*, which is ambiguous between 'live rootedly' and 'increase in size or maturity'.

(231) a. In our garden grew a very hardy and pest-resistant variety of corn.
b. *In Massachusetts grows corn very slowly.

This suggests that the correct characterization of the relevant restriction on verb class is simply (232), which does not distinguish between ECCS and ICCS verbs.

(232) Change of state verbs are excluded from locative inversion.

Contra Levin and Rappaport's first suggestion, I claim that (232) is *not* reducible to (227a). In particular, the "predictability" test cannot properly characterize the distribution of ECCS and ICCS verbs in locative inversion. Rather, *any* change-of-state verb whether of the ECCS type (229) or the ICCS type (231b) will fail to invert with a locative PP. Whenever such a verb affords a secondary, existence/coming-into-existence reading, locative inversion will be fine. Indeed, Levin and Rappaport observe that parallel to (231a), ECCS verbs like *break* and *open* are found in locative inversion only in that secondary sense.

(233) a. Then broke the war, on those awful days in August, and the face of the world changed I suppose forever.
b. Underneath him opened a cavity with sides two hundred feet high.
(Levin and Rappaport 1995, chap. 6, (33), (34))

Further evidence that (232) is unrelated to the discourse condition of "informational lightness" is provided by (234).

(234) a. *In Iran widened the rift between the fundamentalists and the reformists.
b. Over our heads glowed an unfamiliar object.

Despite the nearly idiomatic predictability in *widened the rift*, (234a) is ungrammatical. And despite the fact that unfamiliar objects have no predictable properties, (234b) is grammatical. The contrast reflects the presence versus absence of change of state.

To summarize this point, (232) appears to be a genuine condition on locative inversion, as yet irreducible to other factors. That the effects of (232) are independent of the discourse function of the construction is crucial, since they show up in "experiencer"-inversion, which has no discourse function, as I will show in the next section.[2]

Consider next a plausible consequence of (226a), namely, the ban on clausal negation in locative inversion.

(235) *Across the street didn't stroll gentlemen in tuxedos.

Negating the main event implies that the postverbal NP is *not* introduced on the scene in direct conflict with the discourse function of locative inversion. Notice that presentational *there*-constructions are subject to the same restriction (**There didn't arise a riot*).[3]

Consider next the English-particular feature of locative inversion stated in (226b). It has been widely observed that the fronted locative in English exhibits a mixed behavior, typical of both subjects and syntactic topics (Stowell 1981; Bresnan and Kanerva 1989; den Dikken and Naess 1993; Bresnan 1994). Like standard subjects, the locative undergoes raising to subject or object and triggers *that*-trace effects.[4]

(236) a. [In these villages]$_i$ are likely t_i to be found the best examples of this cuisine.
b. [On this wall]$_i$ I expect t_i to be hung a portrait of our founder.
c. It's in these villages that we all believe (*that) t_i can be found the best examples of this cuisine.

Nonetheless, unlike standard subjects and like topics, the fronted locative cannot combine predicatively with a participial (reduced) relative, does not invert with auxiliaries in questions, and cannot be controlled.

(237) a. She stood on the corner *(on which was) standing another woman.

b. *Did in the corner stand your friend?
c. *[On the top of the page]$_i$ was stated the methodology of the research [without PRO$_i$ being stated its purpose].

That the fronted locative is actually a subject moved to a topic position is further corroborated by its inability to stay in the subject position; compare (236b) and (238).

(238) *I expect on this wall to be hung a portrait of our founder.

Moreover, clausal domains lacking a topic position, like *for*-infinitives, resist locative inversion.

(239) *For in Boston to live many radical activists would not surprise me.

The fronted locative creates a topic island, blocking extraction not only of material internal to the focused theme (which could be attributed to its being postposed and "frozen") but of anything in its clause.

(240) a. *?What kind of mushrooms do you think on these trails can be found specimens of?
b. *?When do you think under this bridge was found Mary's ring?

Thus, there is ample evidence for an analysis like (241) for English locative inversion.

(241) [$_{CP}$ [In the corner]$_i$ [$_{TP}$ t$_i$ stood a woman]]

The fact that the inverted locative in English must vacate the subject position is generally attributed to its categorial status as a PP. Overt occupants of the subject position must be nominal, possibly a universal constraint. Bresnan (1994) shows that in Chichewa, where inverted locatives are genuine NPs, they do occupy the canonical subject position. Indeed, locative inversion in Chichewa does not display the English peculiarities associated with the extra topicalization step.[5]

Returning to covert experiencer raising, note that it crucially lacks the characteristics displayed in (226). Being covert, it cannot convey any discourse information. By assumption, all the discourse-relevant aspects of a sentence must be overtly marked, either by displacement (e.g., topicalization), special discourse markers, stress or intonation. LF-movement thus can never be recruited for such functions. Second, since experiencer raising to [Spec,TP] is not reflected at PF, there is no reason to move the experiencer further to a topic position. The ban on non-nominal elements in subject positions is morphological in nature; this is most clearly seen

in the contrast between (236b) and (238), where a trace of the locative PP but not its phonetic exponent is tolerated as an ECM subject. Thus, the extra topicalization step, forced in (English) overt locative inversion, is superflous in covert experiencer raising; hence, it is prevented by economy.

It follows from the above considerations that many of the peculiar features of English locative inversion will simply be absent from class II/III psych constructions. The presentational focus semantics will be absent, and with it the negation restriction. The syntactic topicalization movement will be absent, and with it the interactions with auxiliary inversion, infinitives, and extraction. The aspectual restriction (232), however, is independent of either (226a) or (226b). Hence, we expect to find its correlate in psych constructions and indeed we do, as I discuss in the next section.

At this point it may be suspected that not much is left from the original reduction of experiencer raising to locative inversion. In particular, what substance is there to this reduction if the basic (some would say, defining) feature of locative inversion its special discourse function is missing in experiencer raising?

I believe that the reduction is warranted despite the disanalogies. The key point to keep in mind is that locative inversion itself is *not* reducible to its discourse function. That is, if the grammatical mechanisms underlying locative inversion reflected nothing but the need to tease apart the "topic" component from the "focus" component then we would have expected the operation to extend much beyond its actual scope. This is so because inversion is licensed only by locative PPs, not by any other PP.

(242) a. *With that axe worked Tom, his father and his grandfather.
b. *For Tom worked his father and grandfather.

Notice that ruling out (242) by reference to the condition that inversion express *presentational* focus will not do. The very term "presentational focus" conceals that which must be explained, namely, why is it that the inverted PP must denote a location, in which the focused constituent is situated? It is easy to imagine that *any* type of topic-focus array would license inversion, yet this does not happen; only locative topics do so.

For this reason, incorporating the lexical feature [loc] into the analysis of locative inversion, as proposed in section 7.2, seems necessary. It is the presence of that feature on both spatial and mental locations that motivates the association with T, the spatiotemporal anchor of the clause. And it is syntactic movement that achieves this association. If overt, the

operation has the additional discourse effect of conveying presentational focus. If covert, there is no such effect, although the [loc] feature is interpreted much the same way.

A final apparent asymmetry is the following: Whereas both locative inversion and *overt* (quirky) experiencer raising are optional, it seems that covert experiencer raising is obligatory.[6] Recall that we have shown that the failure of forward binding with class II verbs (section 8.4) results from LF-raising of the experiencer. Had that raising been optional, binding should have been possible in the base position. Short of an alternative explanation for those facts, then, we are committed to the idea that *all* experiencers end up as LF subjects. However, given that experiencer raising is linked to the [loc] feature, which is shared by all locative arguments, we seem to be driven into one of two conclusions: (i) Some occurrences of the [loc] feature need not associate with T locally (c-command is sufficient); or (ii) locative inversion *is* obligatory nonsubject locative PPs covertly raise to [Spec,TP].

Option (i) preserves the intuitive idea that locative inversion is optional, at the expense of introducing an unexplained distinction between the ways in which the feature [loc] is interpreted on object experiencers and on nonsubject locatives. Option (ii) is faithful to the semantic parallelism between the two constructions at the expense of positing ''obligatory'' locative inversion.

Ideally, the choice should be empirical, since the conceptual tradeoff between the two options is pretty balanced. In particular, evidence for or against nonsubject locatives having clausal scope like object experiencers could settle the matter. Unfortunately, the type of evidence adduced in chapter 8 for the LF quirkiness of object experiencers cannot be reproduced for locatives, for independent reasons. Since locative PPs cannot be surface subjects in English, and PRO is a surface subject, PRO cannot be locative. Thus, adjunct control by a locative is inapplicable. There are no predicates that select both a locative and an infinitive; thus, locative control in Super-Equi constructions is unattested. Finally, since the verbs participating in locative inversion are all eventive (denoting appearance or coming into existence), they will not display any failure of forward binding, an effect restricted to stative class II verbs (e.g., *John and Mary rushed into each other*).

Given this state of affairs, nothing seems to be at stake in choosing between the two options above. For consistency, I will assume option (ii), namely, all [loc]-marked elements raise to [Spec,TP] by LF, experiencers and locatives alike. We keep in mind, though, the tentative nature of this

thesis. Further investigation may reveal irreducible contrasts between locatives and experiencers that may require withdrawal from the thesis. Nevertheless, given the mounting evidence in favor of the fundamental equivalence between locatives and experiencers, the burden of proof would lie with any claim to the contrary.

9.3 Solving the Agentivity Puzzle

9.3.1 Previous Accounts

There is an outstanding fact about psych verbs of class II, which we have repeatedly exploited but so far not accounted for: All the core psych properties (see (156.I)) obtain only in nonagentive contexts. Again and again we have seen that once a class II verb is used agentively, it behaves like any normal transitive verb. This peculiar fact has been noted sporadically (Belletti and Rizzi 1988; Grimshaw 1990; Bouchard 1995; Arad 1998, 2000), but the scope of its systematicity, I believe, has not received due recognition. A major goal of the first part of this monograph has been to demonstrate the agentivity effect across as many phenomena as possible. Accounting for this effect is an important challenge for any theory of psych verbs.

Let us briefly review how previous analyses meet this challenge. For B&R (1988) (and also Arad 1998), all the special psych properties followed from the unaccusative nature of class II verbs. B&R assumed, as is standard, that agents are universally mapped to the external argument position. Therefore, agentive psych verbs will *not* be unaccusative and will not display any special properties. However, although it is true that agentive verbs are normally not unaccusative, there is considerable evidence that neither are nonagentive eventive class II verbs; this has been shown by Pesetsky (1995), and the discussion of languages with verbal class II passives (section 4.1) further establishes this conclusion. Hence, unaccusativity cannot distinguish agentive from nonagentive class II verbs in the general case.

Grimshaw (1990) also attributes the special psych properties to the absence of an external argument in class II verbs (although for her, they do project a deep subject). In nonagentive class II verbs, there is a mismatch between the thematic hierarchy (Experiencer≫Theme) and the aspectual hierarchy (Theme(=Causer)≫Experiencer). An external argument is defined as maximally prominent on both hierarchies; hence none exists in class II verbs. By contrast, an agent argument is ranked higher than the experiencer on both hierarchies; hence it will be the external argument.

A disturbing lacuna in Grimshaw's analysis (noted by her) is the lack of a satisfactory account for classes I (*love* verbs) and III (*appeal-to* verbs). The verbs in both classes are stative, so no obvious event decomposition can identify the aspectually prominent argument. The fact that class I projects the experiencer externally, while class III does so internally, remains unexplained.

Furthermore, while Grimshaw's analysis accounts for several psych properties (e.g., nominalization and reflexivization), it is hard to see how it would extend to the many other phenomena discussed above. Consider, for example, the fact that relativization of the object experiencer must leave a resumptive pronoun in Greek and Hebrew but only in nonagentive contexts (sections 3.3, 3.5). Why should the absence of an external argument correlate with obligatory resumption of the object? Similarly, why should the absence of an external argument block the Genitive of Negation in Russian class II verbs (section 3.2)? The special psych properties are all linked to (and explained by) the nature of the *object* experiencer, rather than the external argument, or lack thereof.

Arad (2000), who focuses explicitly on the agentivity effect, proposes that class II roots can be embedded under two different light verbs: A stative-causative *v* and an agentive *v*. Only the former head is associated with "abnormal" properties, assigning an external role (the causer) but no structural case. In sections 3.6 3.7 I have criticized the problematic notion of "transitivity" implicated in this analysis. More generally, although it neatly correlates aspect and case (an intuition to which I return below), Arad's analysis does not supersede the descriptive level: Nothing in it accounts for why natural languages employ functional heads with the specific clustering of properties we observe and no others. The present analysis does not take any position on the issues raised by distributed morphology. Thus, everything I say here is compatible with Arad's execution (see also McGinnis 2000, 2001). Our goal is rather to gain a deeper understanding of the principles underlying such executions.

9.3.2 Where Agentivity, Aspect, and Locative Inversion Meet

Within the present analysis, all the special psych properties are linked to the presence of a (possibly null) preposition, which governs the object experiencer. By this logic, absence of these properties must indicate absence of the preposition. Our analysis, then, should have the consequence that the psych preposition is excluded from agentive contexts (where no psych properties are manifested). The challenge is to provide principled reasons for this exclusion.

The key to the agentivity puzzle lies, I think, in a fact mostly overlooked in studies of psych verbs. The meaning shift from a nonagentive to an agentive reading of a class II verb is accompanied by an aspectual shift. This correlation is stated in (243).

(243) a. Agentive class II verbs are change-of-state verbs (i.e., accomplishments).
b. Nonagentive class II verbs are states or achievements.

The aspectual properties of psych verbs are a neglected topic. The few studies that address this topic, unfortunately, reach contradictory conclusions. Grimshaw (1990) argued that class II verbs are uniformly eventive (i.e., nonstates); however, Pesetsky (1995) has shown that not all class II verbs are alike: Some, like *scare* and *startle*, favor an eventive reading; others, like *frighten* and *embarrass*, are aspectually neutral; whereas a few verbs, like *concern* and *depress*, are strictly stative. This description has been implicitly adopted throughout the present study. Pylkkänen (2000) holds that ObjExp verbs come in two varieties stative-causative and eventive-causative (the latter being accomplishments).

The question of interest is the following: Ignoring the (relatively few) stative class II verbs what is the aspectual nature of the eventive ones? Van Voorst (1992), running through the standard aspectual tests, concludes that class II verbs are achievements.[7] Discussing the verb *frighten*, he writes: "The transition from not being frightened to being frightened is the beginning of the event, not the end. . . . This is very much like other achievements, such as *see*" (1992, 84). Furthermore, van Voorst claims that "the agentivity of subjects [of class II] is aspectually irrelevant" (ibid.). I agree with the first claim but disagree with the second. That is, though it is true that eventive nonagentive class II verbs are not accomplishments, agentive ones are.

Consider two familiar tests: Temporal modification and (non)ambiguity with *almost*. A nonagentive class II verb resists the *in X minutes* modifier, whereas an agentive one accepts it. Notice that (244a) is marginally acceptable only under the "begin"-reading, not the "end"-reading: That is, a marginal reading exists whereby the jokes began to embarrass Mary after less than five minutes have passed, but it cannot mean that the process leading to Mary's being embarrassed culminated after less than five minutes. The latter reading, however, is easily available in (244b):

(244) a. *In less than five minutes, these jokes embarrassed Mary.
b. In less than five minutes, John embarrassed Mary.

Likewise, the adverb *almost* creates an ambiguity in an agentive context but not in a nonagentive one.

(245) a. John almost frightened Mary (but at the last moment, he decided not to).
b. The movie almost frightened Mary (#but at the last moment, they canceled it).

The reading shared by both variants is the one in which the event of becoming frightened almost took place. The additional reading, in which the causing event almost took place, exists in (245a) but not in (245b), as the continuations in parentheses demonstrate.

I take those facts (which are systematic) to support the claims in (243): Agentive class II verbs involve a change of state, whereas nonagentive ones do not. Exactly how this contrast should be represented is a separate question. The two familiar approaches to such matters are the lexicalist approach, which posits aspectual contrasts among various guises of the same lexical verb, and the constructional approach, which assumes that aspectual information is encoded in the syntax in the form of functional heads. As the choice between those options is not crucial for the present purposes, I leave it open.

The pieces of our account are now all in place. Raising of experiencer objects in class II verbs to the subject position is an instance of (possibly covert) locative inversion (cf. (224)). Locative inversion resists change-of-state verbs (cf. (232)), a discourse-independent property which is hence applicable to covert locative inversion. But agentive class II verbs *are* change-of-state verbs (cf. (243a)). Hence, experiencer objects of agentive class II verbs cannot raise to the subject position. Recall, however, that we posited a [loc] feature on the preposition that governs the experiencer object. To be properly interpreted, that feature was raised to [Spec,TP], pied-piping the experiencer object. Failure to raise the experiencer would therefore result in an uninterpretable structure. Therefore, full interpretation requires that the preposition must not be present in the structure. We thus derive the result that object experiencers of agentive class II verbs are bare nominals, receiving structural accusative case.[8]

A semantic problem may arise at this point. We have assumed that the preposition $\varnothing_{\Psi}$, like any locative preposition, is semantically contentful. Hence its presence or absence should have interpretive effects. In particular, the following question presents itself: If $\varnothing_{\Psi}$ is necessary for a psych interpretation in nonagentive contexts, why is it not necessary for the interpretation of agentive contexts?

The answer to this question, I believe, is also related to the generalizations in (243). In the agentive context, it is the experiencer who undergoes the change of state. It is well known that the canonical realization of affected arguments, which undergo change of state, is the direct object (Dowty 1991; Tenny 1992). Hence it is unsurprising that $\varnothing_{\Psi}$ can be dropped in an agentive context, leaving a bare DP experiencer. Notice that the term "experiencer" itself is not constitutive in any sense, since it is equally appropriate to replace it with "patient" in agentive contexts.[9] By contrast, the experiencer in nonagentive (class II) contexts does not undergo a change of state in the aspectually relevant sense. Rather, it is a locus where a mental state either resides (statives) or appears (achievements). In these "locative" contexts, $\varnothing_{\Psi}$ is a crucial interpretive ingredient.

10 Conclusion

The fundamental thesis running through this entire monograph has been that experiencers are locatives. Importantly, this was taken as a claim about the *syntax* of experiencers and was tested as such. Although I briefly mentioned (in section 2.1) various reasons why this parallelism is conceptually plausible, the empirical arguments presented along the way in no way depended on this plausibility. Put differently, even if there were no obvious conceptual reasons to view experiencers as locations, that would not have compromised the force of the conclusion that the grammar *does* treat them as such.

It seems to me that this point highlights a methodological distinction of some significance. Quite a few analyses of psych verbs have been guided, from the outset, by various semantic intuitions, crucially using them to motivate particular syntactic structures. The intuition that class II verbs are semantically causative has led several authors to postulate an articulate causative structure (Franco 1990; Park 1992; Iwata 1995; Pesetsky 1995); the intuition that they are both stative and causative has led others to postulate special argument structure (Grimshaw 1990; Anagnostopoulou 1999); the intuition that they involve mental states has led others to grammatically reify mental states in some manner (Bouchard 1992, 1995; Arad 1998; Reinhart 2000, 2001, 2002). Although there is little doubt that all these intuitions call for explanation, it is far from obvious that they provide the best probe into the grammar of psych constructions.

The methodology of this study has been quite different. Starting with no pretheoretical semantic guidelines, we focused on the syntax of psych verbs, as revealed in various languages. It turned out, again and again, that object experiencers behave like oblique arguments, whether their governing preposition is overt or not. Converging evidence comes from very disparate phenomena, including clitic doubling, extraction, resistance to case absorption, resumptive pronouns, reflexivization, and causative and

passive constructions. Whereas each of these effects is discussed and explained by some existing proposal, I am not aware of any analysis that reduces all of them to a single factor, as the present study does. In particular, the complex typology of psych passives follows straightforwardly from the idea that only the strategies of pseudo- or quirky passivization can accommodate the hidden preposition in class II verbs.

Part II of this monograph pushed the locative analysis of object experiencers a step forward, arguing that they are subject to an extended version of locative inversion. Exploiting recent theoretical proposals regarding multiple specifiers, I claimed that "inversion" of the object experiencer can occur at LF, creating a second subject position. This explained some well-known scopal properties of object experiencers: their subject-like behavior in adjunct control, their failure to be anaphorically bound by subjects (in stative contexts), and the emergence of additional readings in *wh*-quantifier contexts.

Again, comparing alternative theories, it is instructive to see that the class of proposals that deal with the "oblique" effects and the class of proposals that deal with the scopal effects are almost disjoint. The challenge of explaining both sets of properties has rarely been met. Thus, none of those proposals explains why it is just those arguments that fail to be embedded under causatives in Romance languages that show such peculiar control properties; or why is it that exactly those arguments that trigger obligatory resumption in Hebrew relative clauses give rise to pair-list readings in subject questions. The present account links the two sets of properties in a principled way. It is because object experiencers are locatives that they display oblique behavior *and* "subject"-properties associated with inverted locatives. That this correlation is not an accident is no longer a mystery.

Finally, this study reaffirms the indispensable relevance of crosslinguistic work to theoretical syntax. In particular, it demonstrates how the overt nature of some languages can teach us about the covert nature of others. This reasoning informed both parts of this monograph. First, we have observed that object experiencers in certain languages are overtly oblique. The hypothesis was advanced that rather than exemplifying an arcane option, these languages reflect the universal state of affairs, obscured by null morphology in more familiar languages. Second, we have observed that non-nominative experiencers are overtly quirky in certain languages, occurring in subject position. Again, taking this to be the universal rather than the exceptional case, we hypothesized that *all* object experiencers are quirky; only some languages realize this quirkiness co-

vertly. A general implication, much in the spirit of the principles and the parameters framework, is that major crosslinguistic contrasts reduce to the overt/covert distinction whether in morphology or in syntax. Although important questions about the nature of experiencers remain open, I hope that this study has advanced our understanding of the problem and the theoretical challenges that face future research in this domain.

Notes

Chapter 1

1. I concede that astrologers might not be impressed with this argument, or even find it self defeating.

2. A psych verb is any verb that carries psychological entailments with respect to one of its arguments (the experiencer). A psychological entailment involves an individual being in a certain mental state. Thus, *frighten* is a psych verb since *Mary frightened Bill* entails that Bill is in a certain mental state (i.e., fright); whereas *invite* is not a psych verb, since *Mary invited Bill* carries no entailments as to Mary's or Bill's state of mind (although it does entail that both are human).

3. Class I verbs break into individual level and stage level predicates (*love* vs. *worry*); the latter are often associated with incohative or reflexive morphology, and can be coerced into agentive interpretation (for recent treatments, see Pesetsky 1995; Reinhart 2001, 2002; Pylkkänen 2000). I will not dwell on class I verbs in this monograph.

4. As mentioned above, this is a simplification; *stative* class II verbs are unaccusative, a point to which we will return.

Chapter 2

1. See Baker 1997 for a similar proposal. Iwata (1995) adopts a "reversed" representation, where the experiencer is located within the mental state. Notice that for Jackendoff, the target of fear is identified with its cause. That this is not conceptually necessary has been shown by Pesetsky (1987, 1995).

2. There is in fact evidence that periphrastic and synthetic psych constructions differ in some semantic aspects that cannot be attributed to the single factor of incorporation. In nonagentive contexts, periphrastic forms are possibly telic whereas synthetic forms are not.

i. The movie horrified/enraged Mary for/*in fifteen minutes.

ii. The movie filled Mary with horror/awoke rage in Mary for/in fifteen minutes.

Simple N to V incorporation does not predict such aspectual shifts.

3. Object locatives as in *We loaded the wagon with hay* do not necessarily invalidate (21). The locative here may be (i) an applied object, i.e., an underlying oblique that is promoted by P incorporation, or (ii) a subject of a small clause. Both options are covered by (21). Notice that PP experiencers, as in (16) (20), tend to occur in constructions headed by a psych *noun*, rather than a verb. Below I suggest that in verbal contexts, the experiencer is often introduced by a null preposition. It seems that null prepositions are restricted to such contexts, independently of psych constructions; compare *the amusement *(of) the crowd* and *the promise *(to) Mary of a new pair of shoes*. The reverse, of course, is not true; psych verbs may also occur with overt PP experiencers (*It dawned on Bill that he was being exploited*). See also (38) below.

4. Speas (1990) notes that this example is only acceptable if *it* refers to the memory of his name, not the ability to write it, strengthening the point of the contrast.

5. An anonymous reviewer adds that in Greek, class III experiencers alternate between dative case (nondistinct from genitive in modern Greek) and the locative preposition *se*.

6. For compelling arguments that locatives can be projected as external arguments, see Fernandez Soriano 1999. Doron (2003), discussing the Hebrew facts, concludes (more radically) that an abstract locative preposition is involved even in SubjExp verbs. That move, motivated by uniformity considerations, is problematic. First, in most languages there is no overt evidence for a null prepositional head in SubjExp verbs (as opposed to ObjExp verbs, where the evidence for such a head is compelling). Second, a null P should assign inherent case, so one would expect it to override the structural nominative case of the experiencer.

7. Jelinek and Willie recognize the problem, arguing that although "the experiencer of a psychological state is certainly affected by that experience, his internal state need not be the result of a volitional act on the part of an agent" (1996: 32). Yet whether or not an object is affected does not seem to depend, in the general case, on the volitionality of the subject; and indeed, nonexperiencer direct objects are found in Navajo with nonvolitional verbs like *break* (K. Hale, pers. comm.).

8. Franco (1990) analyzes class II predicates as hidden periphrastic causatives, with a null causative verb that assigns case to the experiencer. Being thematically unrelated to each other, this case must be structural. Hence, Franco rejects Belletti and Rizzi's (1988) claim that the accusative case in class II is inherent. Notice, however, that B&R's analysis was (implicitly) limited to nonagentive verbs precisely those that assign dative to the experiencer in Spanish. Thus, the Spanish facts are not only harmless, but actually congenial to B&R's analysis.

9. Statement (40) holds only in nonagentive contexts. Object experiencers of agentive class II verbs are DPs with standard structural case. In section 9.3 we return to explain this fact.

10. I am disregarding other case bearing elements, such as determiners and adjectives, which I assume acquire case by concord.

Chapter 3

1. Kayne (2000, 142) points out that some Northern Italian dialects may clitic double nonexperiencer direct objects, the latter again surfacing with the dative preposition *a*. The phenomenon is more typical of first and second person pro noun objects.

2. Herschensohn (1992, n. 10) and Bouchard (1995, 364 365) note that the parallel extraction violations in French are much weaker, although detectable. However, Legendre (1989, (17)) points out that *en* extraction in French is not diagnostic of direct objects, as it can apply to inverted unergative subjects.

3. The GN rule is not equally productive for all Russian speakers, so the data in (50) (51) may reflect a real effect only in some dialects (N. Strahov, pers. comm.).

4. In MG, classes II and III are collapsed, and all object experiencers are oblique accusatives, triggering clitic doubling. For some speakers of SG and MG, focus on the object renders clitic doubling optional. Notice that I do not mean to sug gest that *all* instances of obligatory clitic doubling in Greek are related to oblique ness. As shown by Anagnostopoulou (2003), in an important class of cases involving NP movement across an intervening A position, doubling is required to satisfy the Minimal Link Condition. I thank E. Anagnostopoulou for discus sion of these issues.

5. Plausibly, pied piping of the preposition is contingent on the phonetic content of the moved element. This is why it is possible in *wh* questions but not in relative clauses (where the moved element is a null operator); see den Dikken 1995. Thus, P stranding is the only option. As English allows P stranding, no resumptive pro noun is needed (or allowed) in the counterpart of (55). In the English counterpart of (54b), a gap is presumably ruled out independently of P stranding.

6. This was first observed by Sharon Armon Lotem (pers. comm.); see also Arad (1998, 199 200, (35 6)).

7. Indeed, the goal argument of *limed* was dative in earlier stages of Hebrew.

8. In Spanish, too, class III verbs can be reflexive.

i. Hoy, Juan se gustó.
'Today, Juan liked himself.'
(Franco 1990, (25b))

9. Ultimately, the very presence of inherent case on experiencers might be seman tically motivated, as suggested in section 2.1. However, the present point is that reduction as such need not be sensitive to semantic features. Another potential problem with Reinhart's (2002) analysis of class III verbs is the assimilation of da tive experiencers to dative goals. Unlike the experiencer in class II verbs, which is analyzed as [c,+m], the experiencer of class III is [c], the goal/source assign ment. Reinhart is forced into this distinction by her mapping procedure, but she recognizes that this leaves unexplained the fact that class III verbs typically in volve a psychological reading (unlike standard goal taking verbs). Moreover, as we will see in section 8.1, there are compelling syntactic reasons, related to control of adjuncts, to keep dative experiencers distinct from dative goals.

10. I have assumed throughout that reflexive verbs in Romance languages are unergative verbs, in line with Reinhart and Siloni (2004). Notice that the indepen dent evidence for inherent case on object experiencers strengthens that view: this case can only be lexically absorbed; hence reflexive class I verbs must be derived in the lexicon and not, as in most unaccusative analyses, in the syntax. Nonethe less, the present proposal is also compatible with the syntactic (unaccusative) analysis of reflexives. Assume that *si*/*se* absorbs (or spells out) the highest argu ment of the verb, and cliticizes to Infl, triggering the raising of the lower argument to the subject position (Marantz 1984; Kayne 1988). In the case of a class II verb, the causer argument is absorbed (or realized) by *si*/*se*, and the experiencer is tar geted for raising. That experiencer, however, bears inherent accusative case. By assumption, this case cannot be syntactically absorbed. Moreover, Romance lan guages allow neither [V+P] reanalysis nor quirky accusative subjects. Thus, rais ing the experiencer to the nominative position would result in a case clash. By contrast, nothing of the sort happens upon reflexivization of class III verbs. The highest argument now is the experiencer, absorbed (or realized) by *si*/*se*. The target/subject matter argument bears no inherent case, and can freely raise to the nominative position.

11. Notice that the strategies of oblique passivization mentioned above, which are absent from Romance and in any case depend on movement, cannot license caus ativization any more than reflexivization.

12. My analysis incorporates Kayne's (2004) insight that Romance causatives in volve overt ECM type movement of the causee for case reasons, but it does not adopt two additional ingredients of his account: (i) The preposition *à* is merged separately from the embedded subject and acts as a probe for VP fronting (to its specifier); (ii) standard ditransitive constructions (e.g., *Jean a donné un livre à Paul*, 'John gave a book to Paul') involve a parallel derivation, with overt raising of the dative argument. Claim (i) implies that the sequence *à DP* is never a con stituent, a consequence that raises a host of problems (as Kayne observes). Claim (ii) implies that dative case is structural even when tied to the θ role Goal, a con sequence that undermines the inherent/structural case distinction. Notice that the very contrast in (83) argues against a parallel treatment for dative causees and da tive goals.

Chapter 4

1. There is nothing "pseudo" about pseudo passives; a better term perhaps is "applied passive," familiar from Native American and Bantu languages, where an applicative morpheme (in English, the incorporated preposition) "promotes" an oblique argument to a direct object. (91a) recalls, of course, Kayne's (1981) pa rameter of "P as a structural governor," which accounted for contrasts in P stranding, ECM, and Comp PRO effects between English and French. It may be a special case of Kayne's parameter, although I think a finer distinction is needed between P stranding under A and $\bar{A}$ movement (which are not coextensive).

2. Pesetsky (1995, n. 47) mentions a suggestion by R. Mulder that a null preposi tion introduces the objects of *escape*/*elude*. This is precisely the present proposal,

which extends to *all* accusative experiencers. In the case at hand, though, what blocks passivization is not the null preposition but the lack of external argument.

3. The Dutch data are taken from den Besten (1989) and R. Mulder (pers. comm. to Pesetsky). Pesetsky mentions another test compatibility with the auxiliary *worden* but judgments on that seem less stable.

4. Notice that the stative verb in (110a) is causative; the main point of Pylkkä nen's paper is to establish the existence of an aspectual class (of psych verbs) that is *both* causative and stative.

5. See Reinhart 2001, 2002 for a possible decompositional account of (113).

6. Notice that certain languages have productive dative subjects in various envi ronments (e.g., infinitives in Russian, the evidential mode in Georgian, causatives in Romance). By all tests this is *structural* dative and hence does not fall under (114).

7. A recent attempt to derive the same result is developed by Reinhart (2000, 2001, 2002), where θ roles are decomposed into constituent features, [±c] (cause) and [±m] (mental state). Mapping rules operate on features, linking [+c] and [+m] roles to the external argument position. One important difference between the present system and Reinhart's is the relative ranking of internal arguments: (113) dictates that even when both arguments are internal, the experiencer is higher than T/SM. By contrast, Reinhart's system distinguishes only between the external argument and the internal arguments; the latter are unordered. This is particularly problematic because there is considerable evidence from word order and scope that the experiencer *is* higher than T/SM in unaccusative psych verbs, evidence that is used, but not explained, by Reinhart (2001).

8. Cf. the English alternation *sunk*/*sunken* between the verbal and the adjectival participles.

9. For discussion and data, I am grateful to Lisa Brunetti.

10. The same logical flaw afflicts B&R's (1988) and Grimshaw's (1990) arguments against verbal passives of class II in Italian and English (see Pesetsky 1995 for ex tensive discussion).

11. Doron (2003) argues that Hebrew passive is compatible only with verbs that select an actor (normally, an agent) as their external arguments. Since psych verbs select a causer but not an actor, they cannot passivize. The first claim, however, is false; Hebrew has stative passives with no Actor (see next note). Moreover, the psych verbs in categories (127b,c) do allow agentive passives, even though their active forms select a causer. Hence, the absence of nonagentive psych passives cannot be reduced to a general property of Hebrew passives.

12. Notice that one cannot rule out *al yedey* in (129b) by assuming that this prep osition occurs only in agentive/eventive passives. In fact, stative *nonpsych* verbs allow it.

i. ha bama hustera al yedey ha masax.
the stage was hidden by the screen
'The stage was hidden by the screen.'

13. There are two exceptions that have both fake passive and reflexive forms: *zu'aza*/*hizda'aze* 'shock' and *suxrar*/*histaxrer* 'dazzle'. I can only speculate that this is related to the fact that the psych reading of these verbs is parasitic on a physical, nonpsych reading. Notice that lack of a reflexive/incohative variant is a necessary but not a sufficient condition for the formation of a fake passive; some verbs may lack such a variant simply due to a lexical gap (e.g., *hexli*/**nixla*/ **hitxale* 'sicken').

14. But not among ECM verbs.

i. John was wagered/affirmed/announced to have cheated on his wife.

ii. *We wagered/affirmed/announced John to have cheated on his wife.

15. The occurrence of unergative psych verbs with irregular passive morphology is perhaps less surprising than it first appears. The reverse situation is also attested: The passives of the verbs *kibel* 'accept, receive' and *gila* 'discover' are the morphologically reflexive *hitkabel*/*hitgala*, not the expected **kubal*/**gula*. Of course, this is familiar from Romance, where passive/middle constructions can be formed with *si*/*se*. Thus, the lexical operations saturation and reduction nor mally map to passive and reflexive morphology, respectively; however, irregular forms may arise when the mapping is reversed.

Chapter 5

1. As far as I am aware, the fact that the T/SM restriction fails to distinguish agentive from nonagentive psych constructions was noted (in passing) only by Anagnostopoulou (1999, (47)). Bouchard (1995, 333) denies this, citing as gram matical examples like (i ii):

i. Mary satisfied Bill with her trip to Beijing.

ii. Mary bores John with her life as a linguist.

However, English speakers that I have consulted reject (i), and accept (ii) only on a "speech act" reading (Mary is talking to John on and on about her life as a lin guist); in fact, this is Bouchard's own rendering. It is also possible that *with* PPs admit an *instrumental* reading, licensed in agentive contexts. This does not change the general fact, illustrated below in Hebrew as well.

iii. *Gil be xavana icben/zi'azea et Rina al/me ha toxnit.
Gil in intention irritated/shocked ACC Rina on/of the program
'Gil deliberately irritated/shocked Rina about/with the program.'

2. Curiously, Pesetsky (1995, 68) notes that the T/SM restriction in Japanese shows up in agentive contexts. He also speculates (n. 179) that *CAUS* may occur in agentive contexts, to allow, at least marginally, backward binding. However, elsewhere (ibid., 197) he denies this option, assuming that *CAUS* affixation sup presses the agent role. This plays an important role in his explanation of certain restrictions manifested by double object verbs in their causative use (but not in their agentive use): First, "Oherle's effect" (*Katya*/**Lipson's textbook taught Rus*

sian to me) and second, nominalizations (*Bill's/*hard work's procurement of the prize*).

Chapter 6

1. Åfarli and Lutnaes (2002) discuss class II verbs in Norwegian, which historically derive from class III verbs in Old Norse. Indeed, many of their properties can be explained on the assumption that the experiencer bears inherent accusative case.

2. In fact, there is some evidence that even in this domain, experiencers are different from canonical objects. It is well known that participial agreement in French is frequently not audible, and even when it is, nonformal speech treats it as an optional rule. Still, for some speakers, participial agreement is obligatory when possible. Interestingly, for those speakers, a contrast emerges between agentive and nonagentive uses of class II verbs (I am grateful to M. A. Friedemann for bringing this fact to my attention).

i. Les femmes que la tempête a surpris(?es) sont parties.
The women that the tempest has surprised are left
'The women that the tempest surprised have left.'

ii. Les femmes que les invités ont surpris??(es) délibérément sont parties.
The women that the guests have surprised deliberately are left
'The women that the guests surprised deliberately have left.'

Agreement is disfavored in the nonagentive case (i), and strongly favored in the agentive one (ii). Under the present analysis, this contrast is anything but surprising: It is only in nonagentive contexts that accusative experiencers display the behavior of oblique arguments (which, of course, never trigger participial agreement). Unfortunately, it is very hard to find other class II participles that both allow this ambiguity and display audible agreement. Yet the direction of the contrast is telling.

Chapter 7

1. Dative PPs and genitive morphology often alternate in Greek, so Anagnostopoulou (1999) glosses the genitive morphology in (157) as dative.

2. Platzack (1999, n. 8) notes that many Icelandic speakers tend to replace the accusative case of the experiencer of these verbs with a dative case, confirming its inherent status (as in Italian and Spanish; see sections 2.2.2, 3.1). Platzack also notes that the accusative case on the experiencer is preserved under raising, as is typical with quirky subjects.

i. Mig/*Eg virðist dreyma ömmu.
me.ACC/*I.NOM seem to dream grandma.ACC
'I seem to dream of grandma.'
(Platzack 1999, (14))

For theory internal reasons, however, Platzack assumes that the accusative case on the theme is also lexical. Yet no independent evidence is given for this, and in fact, the most straightforward account for the lack of the Th. V Exp. variant with these verbs is the *structural* nature of the case on the theme.

3. The "desiderative experiencers" in Imbabura Quechua, discussed by Hermon (1985), are probably quirky accusatives. They can be realized as controlled PRO and raise across raising/passive ECM predicates, much like standard surface subjects. For theory internal reasons, Hermon suggests that they become subjects only in the LF component; however, most of those reasons lose force in current theories. See n. 10 of chapter 8, this vol.

4. Mulder (1992, 121) argues that inverted accusative experiencers in Dutch class II verbs are in fact "embedded topics," conditioned by animacy contrasts, and are not quirky subjects (like dative experiencers). Dative experiencers with typical subject properties have also been reported to exist in Kannada (Sridhar 1979).

5. According to Masullo, quirky accusative subjects are found only in impersonal constructions, where [Spec,IP] is nonthematic.

i. A nadie lo llaman por el apellido aquí.
to nobody cl.ACC they call by his/her last name here
'They don't call anyone by his/her last name here.'
(Masullo 1992, (45))

It is not clear to me that these are genuine quirky subjects (despite the bare quantifier that is supposed to rule out left dislocation). Unlike all the other cases Masullo cites, these are not unaccusative. If Spanish did allow accusative subjects (like Icelandic, Faroese, and Greek), class II verbs at least the stative unaccusative ones should exemplify this option, but they do not.

6. Because Italian (unlike Greek) disallows accusative subjects, Anagnostopoulou (1999) concludes that experiencers in Italian class II receive structural rather than inherent case. That would follow only if the typological picture was binary, with (164a,c) the only options. But there is independent evidence that in languages like Italian and Spanish, accusative experiencers do bear inherent case (see sections 2.2.2, 3.1) without ever occurring as surface subjects. This implies (at least) a tripartite typology.

B&R (1988, n. 33) speculate that the option of dative subjects arises only in null subject languages, where Infl can assign nominative case to the right. This explains the Italian French contrast, but fails to account for Icelandic (which allows dative but not null subjects) and Hebrew (which allows null but not dative subjects). Moreover, their way of blocking quirky accusatives in Italian (inherent case must be licenced by a governing preposition at S structure) is too strong, excluding them in *any* language. Masullo (1992) suggests that there are two kinds of quirky subjects: The Italian/Spanish type, which depends on nominative assignment to the right, and the Icelandic type, which is lexically governed.

7. See Taraldsen 1995, Anagnostopoulou 2003, and Sigurðsson 2004 for the claim that quirky subjects enter a [person] relation with T^0.

8. See Moore and Perlmutter 2001 for a recent attempt to restore a primitive notion of subjecthood.

9. Note that "raising at LF" here is just a traditional way of referring to covert movement, fully consistent with recent derivational models denying the existence of LF as an isolated grammatical component. That is, covert movement is cyclically integrated with overt movement; the difference is only reflected in PF (pronunciation of high or low copies). See Groat and O'Neil 1997, Bošković 2001, and Bobaljik 2002 for discussion.

The idea that the experiencer raises at LF to a second subject position has been proposed by Campbell and Martin (1989). They, however, restrict LF raising of the experiencer to stative predicates (whereas I assume it applies to eventive ones as well) and make it optional (whereas I assume it is obligatory). Campbell and Martin's evidence largely consists in backward binding effects, shown above to be nonstructural (section 5.3); furthermore, they do not address the question of *why* experiencers raise at LF. Evidence in favor of the present analysis will be discussed below.

Chapter 8

1. Legendre (1989) argues that some adjuncts in French infinitives headed by *avant/après/sans/en* 'before/after/without/while' can be controlled by a demoted subject. For these, the statement in (169a) would be less restrictive, with 'subject' substituting for 'surface subject'. Other than that, the control facts are the same, classifiying dative experiencers with subjects.

2. Control of secondary predicates also distinguishes dative experiencers from dative goals, as the following Spanish examples illustrate.

i. Le ocurrió un accidente borracha.
to her happened an accident drunk

ii. *Le entregaron el premio a Juan borracho.
to him they gave the prize to Juan drunk
(Fernández Soriano 1999, (38c,d))

3. The example (176c) is adopted from Anagnostopoulou (1999, (19c)), with the important difference that the accusative experiencer does not appear in the (quirky) subject position. E. Anagnostopoulou informs me that as long as the psych verb is used nonagentively, the experiencer can control the adjunct from the object position as well. This is precisely what we expect, given that the special psych properties always emerge in nonagentive contexts.

4. The control properties of accusative experiencers in Italian are murky. Perlmutter (1984) argues that unlike dative experiencers, accusative ones cannot control, based on the following example.

i. *La difficoltà finanziarie preoccupavano tanto Mario da ammalarsi.
'Financial difficulties preoccupied Mario so much that he got sick.'
(Perlmutter 1984, (59b))

However, Cresti (1990) claims that the problem with (i) is not the *case* of the experiencer but its *position*. Namely, in order to control, it must be either a clitic or

preverbal. Since the latter option is impossible in Italian (no accusative subjects), only the former exists.

ii. Questa cosa lo preoccupa talmente da esserne ossessionato.
This worries him_1 so much that (he_1) be obsessed about it
(Cresti 1990, (4.25))

Contrary to Perlmutter's and Cresti's data, there *are* examples where postverbal accusative experiencers control (a *da* infinitive in (iii) and a temporal adjunct in (iv); G. Cinque, pers. comm.).

iii. Questa cosa preoccupo' Gianni a tal punto da rimanerne segnato per il resto della sua vita.
'This thing worried Gianni_1 to such an extent that he_1 remained marked for the rest of his life.'

iv. La sua malattia preoccupava Gianni (anche) prima di essere operato.
'His illness used to worry Gianni (also) before being operated.'

Cresti also argues that dative experiencers must be preverbal in order to control *da* infinitives. G. Cinque (pers. comm.) notes that temporal adjuncts are different, allowing control by a postverbal dative experiencer.

v. Il sole manco/comincio a piacere a Gianni solo dopo essere stato in California.
'Gianni missed/began to like the sun only after being in California.'

Overall, then, it seems that postverbal experiencers both dative and accusative can control in Italian, although some subtle distinctions between different ad juncts require further investigation.

5. Hermon (1985) shows that "lexical experiencers" in Imbabura Quechua, which are accusative objects, can control temporal nonfinite adjuncts, whereas nonexpe riencer objects cannot. Sridhar (1979) shows that dative experiencers, unlike da tive goals, can control nonfinite adjuncts in Kannada.

6. (182) generalizes over a set of conditions, each associated with a specific type of adjunct. Some types permit a final 1 chômeur as a controller (see n. 1 of this chapter).

7. Legendre (1989, n. 23) mentions a suggestion by L. Rizzi on how to deal with the control facts within GB. According to this suggestion, (i) experiencers are the matically higher than goals, hence structurally higher; and (ii) the controller must c command the adjunct at D structure or S structure. However, (ii) assumes that the adjuncts under discussion are VP internal (otherwise, the dative/accusative experiencer would not c command them). This is implausible for clause final adjuncts, and clearly impossible for initial adjuncts (nor are the latter moved from inside the VP, as the lack of reconstruction effects suggests).

8. The RG literature does not make this point, but it is worth noting that another alternative to a structual solution is untenable namely, *logophoric* control. It is well known that in long distance control (Super Equi), the controller must be a logophoric center, much like the antecedent of a *picture* anaphora (Grinder 1970;

Kuno 1975; Lebeaux 1985; Williams 1992; Manzini and Roussou 2000; Landau 2000). Consider the minimal pair.

i. John said to $Mary_1$ that it was possible that [PRO_1 praising herself] had been a mistake.

ii. *John said about $Mary_1$ that it was possible that [PRO_1 praising herself] had been a mistake.

Addressees of communicative acts thematic *goals* qualify as logophoric centers, whereas subject matters of mental attitudes do not; hence the control contrast. Observe that the cases of adjunct control discussed in the text respect a stricter condition, excluding goal controllers (e.g., (170e), (172d), (173e)). Furthermore, adjunct controllers can be inanimate (unlike logophoric controllers).

iii. Etalée en une couche très mince, la peinture sécha en une heure.
'Spread in a very thin coating, the paint dried in an hour.'

iv. Cette chambre conviendra à mes parents tout en n'étant pas tout à fait à leur goût.
'This room will be OK for my parents while not being quite to their taste.'
(Legendre 1989, (34b), (68d))

Thus, adjunct control cannot be reduced to logophoric control (see Williams 1992 for an explicit distinction).

9. It might be objected that nominative associates in expletive constructions can control adjuncts (Cardinaletti 1997). However, this option is severely limited, as the following examples suggest.

i. There entered the room three unidentified men_1 [without PRO_1 introducing themselves].

ii. ??There entered the room three unidentified men_1 [while PRO_1 chatting with each other].

iii. *[PRO_1 covered with mud], there entered the room three unidentified men_1.

It appears that *without* adjuncts are attached lower than other adjuncts, so control into them does not diagnose subjecthood.

10. Most of the internal problems in Hermon's (1985) analysis, I believe, are due to the failure to recognize the option of quirky (non nominative) surface subjects. If desiderative experiencers in Imbabura Quechua and dative experiencers in Kannada are indeed surface subjects and not objects that raise covertly as Hermon suggests, then their ability to undergo raising (across *seem* and passive ECM verbs) and to function as controlled PRO need not contradict their morphological case. The interesting case, where only LF subjecthood is attested, is that of *lexical* (accusative) experiencers in Imbabura Quechua (e.g., with the verb *hurt*); this case falls together with the data discussed in section 8.1.1.

11. If Fox (2000) is correct in claiming that LF operations must give rise to novel interpretations, otherwise economy blocks them, then extraposition in (193b) would be at most *phonological*, the LF copy being the base copy.

12. The ambiguity of (197a) indicates that the animacy factor, if relevant, is only secondary.

13. Neither Kim and Larson (1989) nor Chierchia (1992) mention this, but the ambiguity of subject questions with object quantifiers is also found with class III verbs.

i. (I want to know) which painting appeals to every collector.

ii. Las Meninas.

iii. The one he bought.

iv. The Picasso appeals to Mr. Roberts, the Goya appeals to Mr. Morrison, . . .

14. The relevant configuration at [Spec,TP] holds also with class III verbs, hence the ambiguity noted in the previous note.

15. According to Roberts (1991, (31)), forward binding is marginal only with reflexives, not with reciprocals.

i. ??John amuses/disgusts/horrifies/irritates himself.

ii. We amuse/disgust/horrify/irritate each other.

Roberts argues that reciprocal binding is not subject to Condition A, but rather to some locality condition on QR of the bare quantifier *each*. If these judgments are solid, then the text's analysis should be similarly restricted to reflexive binding.

16. Most likely, the notion of *individual* relevant to binding theory is abstract enough to cover what Grimshaw calls *properties*; thus the shift from *John* to *John's gaudiness* is a shift in *reference*, not in type. It is independently known that reference shift can feed binding, but this interaction is grammatically constrained.

i. Norman Mailer reads himself before going to sleep.

ii. The mushroom omelet dirtied himself with ketchup.

iii. *The mushroom omelet was eating himself/itself with chopsticks.
(Abusch 1989, (9), (5), (6))

Notice that in (i) the anaphor is shifted (author to book), mismatching the sub ject; in (ii) the subject is shifted (food to customer, in a restaurant context), matching the anaphor; and in (iii) the subject is shifted (food to customer), mis matching the anaphor. Contrary to Grimshaw's proposal, Abusch argues that mismatch (in reference of antecedent and anaphor) as such does not exclude bind ing; and the cases that *are* excluded (like (iii)) do not violate Condition A, but rather yield anomalous interpretations.

17. This analysis is reminiscent of the "lethal ambiguity" scenario described by McGinnis (2004). In that scenario, a DP fails to be linked to its trace, if the trace is a cospecifier of another coindexed DP; the failure stems from nondistinctness (in index and "address"). Nonetheless, McGinnis (2004, 73 75) attributes to psych verbs a derivation without the "leapfrogging" step that could give rise to lethal ambiguity; hence it is unclear whether she can explain the failure of forward binding with stative class II verbs (and why eventive verbs are different).

18. Of course, this contrast also corroborates Pesetsky's (1995, 52 53) distinction between transitive and unacccusative class II verbs.

19. Iatridou (1988) and Anagnostopoulou and Everaert (1999) argue that only the pronominal clitic part of the complex Greek anaphor *o eaftos tu*, 'the self his' (namely, *tu*) is coindexed with the antecedent. The implication for our analysis is that Condition C will not be violated in the Greek counterpart of (214b), recon struction will not be forced, and (220) will be incorrectly permitted. A possible so lution, then, is to withdraw the assumption that cospecifiers mutually c command each other. The outer specifier of T, occupied by the anaphor, will need to recon struct alone in order to satisfy Condition A, but this will violate (215).

20. The claim that object experiencers are LF subjects does not entail that they must have scope over other scopal elements. Consider the examples below.

i. Something annoys everyone.

ii. The weather didn't upset everyone.

(i) is ambiguous in the familiar way; after LF raising of the experiencer *everyone* to the (second) subject position, the theme *something* may still undergo QR to ob tain wide scope. The fact that (ii) is unambiguous, with narrow scope for the expe riencer, may seem problematic. Notice, however, that this falls under a systematic (and poorly understood) generalization, namely, negation always "freezes" the scope of lower quantifiers, experiencers or not (e.g., the nonambiguity of *The weather didn't delay everyone*). Possibly, obligatory reconstruction "undoes" the effect of LF raising, as proposed for other cases by Bobaljik (2002).

Chapter 9

1. Culicover and Levine (2001) argue that the unaccusativity condition does hold of genuine locative inversion; apparent inversions with unergative verbs in fact in volve Heavy NP Shift of the subject to a right adjoined position. Nothing in what follows, if correct, will be affected by this claim. The two properties that are cru cial for us are shared by both types of inversion: The fronted PP must be a loca tive, and the verb must not denote a change of state (see (232) below).

2. Notice that I take no stand here on the independent role of (227a) in a full ac count of locative inversion. The point in the text is that (232) does not follow from, hence cannot support, (227a), and by extension, (226a).

3. At times it has been suggested (anonymous reviewer and Coopmans 1989) that locative inversion is also incompatible with modals. However, there are clearly perfect counterexamples, like (230a) above and (i) (ii).

i. I expect that on this wall will be hung a picture of Leonardo Pabbs.
(Bresnan 1994, (97a))

ii. Behind the tree should be found the buried treasure.
(M. Rappaport, pers. comm.)

4. Examples (236a c), (237a), (238), and (240a) are due to Bresnan (1994).

5. Unlike locative PPs, the expletive *there* in English is categorially underspeci fied, and hence freely occurs in the canonical subject position. I ignore the special case of copular sentences, whose subjects need not be nominal (e.g., *Is under the bed a good place to hide?*).

6. Actually, the first part of this statement is not entirely accurate. As mentioned in the discussion of (159) (160), not all psych verbs in Icelandic and Faroese are "dual"; some allow only the quirky experiencer to be the surface subject. The syn tax of these verbs, then, represents the pattern of all psych verbs at LF.

How to *force* experiencer raising is a problem recognized in previous accounts as well. Hermon (1985, 250) speculates that experiencer raising is not an instance of free, optional Move α operation, but rather of a *local rule*, akin to case marking and clitic spell out. Stowell (1986) imposes selectional conditions on the realization of argument structure, to the effect that nonagent animate θ roles must be internal at DS but external at LF, triggering experiencer raising. Park (1992), inspired by Grimshaw's (1990) two tier analysis, claims that the thematic hierar chy Exp ≫ Th must be structurally represented; since DS and SS represent the aspectual hierarchy, where Th(= Cause) ≫ Exp, the experiencer must raise above the theme at LF to reflect its thematic prominence.

7. Actually, van Voorst's (1992) conclusion is much more radical, stating that *all* psych verbs are achivements. This is clearly an overstatement for classes I and III verbs (some of which are individual level predicates), and also for class II verbs like *concern, preoccupy, depress, fascinate*.

8. In principle, one could save the oblique derivation in agentive contexts simply by allowing a variant of the preposition without the lethal [loc] feature. On the plausible assumption that the constituition of lexical items is fixed and immune to manipulation, this option does not exist.

9. A similar thematic "fusion" is attested in examples like *John moved*, where *John* can be said to be both an agent and a theme.

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