

Social Morphogenesis

Margaret S. Archer *Editor*

Generative Mechanisms Transforming the Social Order

 Springer

Generative Mechanisms Transforming the Social Order

Social Morphogenesis

Series Editor:

MARGARET S. ARCHER

University of Warwick, Centre for Social Ontology, Coventry, UK

Aims and scope:

To focus upon 'social morphogenesis' as a general process of change is very different from examining its particular results over the last quarter of a century. This series ventures what the generative mechanisms are that produce such intense change and discusses how this differs from late modernity. Contributors examine if an intensification of morphogenesis (positive feedback that results in a change in social form) and a corresponding reduction in morphostasis (negative feedback that restores or reproduces the form of the social order) best captures the process involved.

The series consists of 5 volumes derived from the Centre for Social Ontology's annual workshops "From Modernity to Morphogenesis" at the University of Lausanne, headed by Margaret Archer.

More information about this series at <http://www.springer.com/series/11959>

Margaret S. Archer
Editor

Generative Mechanisms Transforming the Social Order

 Springer

Editor

Margaret S. Archer
Centre for Social Ontology
Department of Sociology
University of Warwick
Coventry, UK

This volume III follows the book “Social Morphogenesis”, edited by Margaret S. Archer, which was the first book in the series published in 2013 <http://www.springer.com/social+sciences/book/978-94-007-6127-8> and the volume “Late Modernity”, edited by Margaret S. Archer, published in 2014.

ISSN 2198-1604

ISSN 2198-1612 (electronic)

Social Morphogenesis

ISBN 978-3-319-13772-8

ISBN 978-3-319-13773-5 (eBook)

DOI 10.1007/978-3-319-13773-5

Library of Congress Control Number: 2015932853

Springer Cham Heidelberg New York Dordrecht London

© Springer International Publishing Switzerland 2015

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

Springer International Publishing AG Switzerland is part of Springer Science+Business Media (www.springer.com)

Foreword



This book is Volume III of a series, written by the same group of authors, although we have tried to make it self-contained for the reader who encounters this text first. Nevertheless, we owe such readers an explanation of *why* we are working in what may seem a long drawn out manner. Perhaps a comparison helps. In empirical studies (and a few historical projects) it is quite common for publications to come from an established research team that examines different aspects of the problem in hand in different works. Where Social Theory is concerned, this is rare. Thus, even when reference is made to a ‘school of thought’, such as Critical Theory or Critical Realism, it does not imply continuous and collaborative work between the same thinkers. Some may have been influenced by or have been the students of others; some of them may have coalesced to write a single volume; and some may show their affinities to the ‘school’ by the books they write several years or decades later. In other words, it is unusual for theorists to get together *in advance* to examine theoretical propositions in the manner that is frequently encountered among researchers of empirical hypotheses.

Why does our group work collectively in this manner, especially since we do not all affiliate ourselves with the same school of thought? In part, the reasons are negative. As a group, we are unimpressed by the over-hasty proclamation of ‘new ages’ and the promises of ‘beyondisms’, littering the journals. In greater part, we agree with most others that Late Modernity is unstable, is undergoing unprecedented change (in kind and in degree), is in crisis, and represents ‘turbulent times’. But, unlike the many theorists who have effectively given up on explanation – sometimes

seduced by the trope of ‘complexity’ and sometimes reconciled to Late Modernity being a ‘runaway society’ – we still hold that there are determinate *processes* involved and a determinate *outcome* to be grasped.

In brief, our common denominator is that we consider the *process* of morphogenesis as outstripping that of morphostasis, and the *outcome* as being a form of morphogenic social formation is a notion worth examining; yet we remain explorers not missionaries, agnostics not true-believers. We invite the reader to join us on the journey, nothing more, except to experience that Social Theory can be enriched by working with a common focus and that theorists are not eternally condemned to committing mutual atrocities. Travelling with us will not be for everyone. We are – for different reasons – a deeply humanistic group; people matter, what matters to people matters and the well-being of each and every member of global society is dependent upon a social formation that universally promotes human well-being.

This volume concentrates on the *processes of change*, conceived of as ‘generative mechanisms’ that produce tendencies towards change in the relational organization of the social order. However, each such tendency can be paralyzed, suspended or distorted by the co-existence of other countervailing mechanisms and by the intervention of unforeseeable contingencies. This means that ‘generative mechanisms’ are explanatory without being predictive, as is necessarily the case in an open system like the social order, where the creativity of its members for ever precludes the social from resembling the mechanical or the organic.

This volume is divided into three parts. The first compares and contrasts the different conceptions of ‘generative mechanisms’ in the social sciences where notions of ‘causal mechanisms’ are becoming increasingly popular, as part and parcel of the retreat from empiricism in the philosophy of science. Part II ventures some specific mechanisms held to be at play in Late Modernity, responsible for certain observable phenomena, yet portending different kinds of finalism depending upon which predominates. Part III reminds us that morphostasis does not mean fading quietly away; some things do not change and others are well placed to resist change, but the concept of ‘morphonecrosis’ is introduced to explain the conditions under which certain social phenomena do indeed (metaphorically) die out. Only in Volume V of this series will we conclude whether or not the interplay between the mechanisms currently at work does indeed herald a morphogenic society.

In editing this Series, I would like to thank the group itself for the relational goods it has produced: collaboration with the warmth of friendship, commitment to the punishing schedule of writing a book a year, and co-operation in generating this emergent entity, the Series itself. We are more than grateful to the Independent Social Research Foundation for having the confidence in us to renew their funding of this project for a further 3 years. Last, but far from least, we thank Esther Otten and Hendrikje Tuerlings at Springer for enabling us to undertake the experiment in Social Theory that this Series represents.

Kenilworth, UK
October 2014

Margaret S. Archer

Contents

1	Introduction: Other Conceptions of Generative Mechanisms and Ours	1
	Margaret S. Archer	
Part I Conceptualising Mechanisms		
2	Causal Mechanisms: Lessons from the Life Sciences	27
	Philip S. Gorski	
3	Mechanisms and Models: Some Examples from International Relations	49
	Colin Wight	
4	Social Mechanisms and Their Feedbacks: Mechanical vs Relational Emergence of New Social Formations	65
	Pierpaolo Donati	
Part II Venturing Morphogenetic Mechanisms		
5	“Mechanisms” at Work in Information Society	95
	Wolfgang Hofkirchner	
6	Body Captors and Network Profiles: A Neo-structural Note on Digitalized Social Control and Morphogenesis	113
	Emmanuel Lazega	
7	How Agency Is Transformed in the Course of Social Transformation: Don’t Forget the Double Morphogenesis	135
	Margaret S. Archer	
8	Turbulence and Relational Conjunctures: The Emergence of Morphogenic Environments	159
	Andrea M. Maccarini	

Part III Mechanisms and Morphostasis: Powers of Life or Death

9 Why Don't Things Change? The Matter of Morphostasis..... 185
Douglas V. Porpora

**10 The Modern Corporation: The Site of a Mechanism
(of Global Social Change) that Is Out-of-Control?..... 205**
Tony Lawson

**11 Death Contested: Morphonecrosis and Conflicts
of Interpretation..... 231**
Ismael Al-Amoudi and John Latsis

Chapter 1

Introduction: Other Conceptions of Generative Mechanisms and Ours

Margaret S. Archer

This series of books examines a single question: ‘Will Late Modernity be replaced by a social formation that could be called Morphogenic Society?’ Social theorists of different persuasions have accepted that ‘morphogenesis’ (Buckley 1967)¹ has rapidly increased from the last decades of the Twentieth century (and some have presumed this means that processes of ‘morphostasis’ are in proportionate decline).² Indeed, this view has been elevated to the status of ‘acceleration theory’ (Rosa 2003; Rosa and Scheuerman 2009), which was seriously critiqued in our last Volume (2014). Fundamentally, the proposition about the possible advent of a (global) Morphogenic Society concerns the transformation of a social formation. It is not synonymous with a tally of amounts or speed of social changes, always supposing the quantum of change could be counted and that ‘speed’ could be measured and be meaningful without reference to directionality. Instead and by definition, any social formation has a particular *relational organization* between its parts. No metrics putatively gauging the *amount* of change can capture this *form* of organization because empiricism necessarily ignores that which crucially differentiates one social formation from another.³ Yet, that is precisely our concern.

As such, we are seeking a causal explanation of what could (might or does) lead the social formation of late modernity to change into a one that is very different in

¹ Defined as ‘those processes which tend to elaborate or change a system’s given form, structure or state’. (Buckley 1967: 58).

² In Volume II we maintained that this is not automatically the case, if only because new stabilization processes can come into being (2014, ‘Introduction: “Stability” or “Stabilization” – on which would Morphogenic Society depend?’, 1–20).

³ For example, Ancient Indian society, as described by Weber, was not changeless but entailed an increasing ‘density’ of Caste rules and the Hindu cultural conspectus that elaborated on its ‘concomitant complementarities’ (Archer 1988: 209–19) and thus accentuated a distinctive directionality that reinforced its relational organization between kinship, caste and khama.

M.S. Archer (✉)

Centre for Social Ontology, Department of Sociology, University of Warwick, Coventry, UK
e-mail: margaret.archer@warwick.ac.uk

kind *precisely in terms of its relational organization*. This is to ask a causal question and in the previous Volumes (Archer 2013, 2014) we have shown why uni-factorial accounts are unsatisfactory. That is, ones proclaiming ‘new Ages’ (Information, Technological, Network, Risk Society etc.) on the basis of a single but striking form of change – empirical or actual – which is then deemed to be transformatory of the entire social order. The root reason is that each and every such account explains nothing about the nature of relational organization, except implicitly to assert that there is a new ‘leading part’ through whose hegemony all the others become conformed by processes that remain causally opaque. Equally, we are dissatisfied with those multi-variable approaches that effectively substitute prediction for explanation. Not all contributors to this volume are Critical Realists, but we agree that causation is not the establishment of correlations between variables. Instead, ‘generative mechanisms’ are required to (a) explain such associations (i.e. how they arose and work) and (b) are robust enough to account for cases and times when no such ‘constant conjuncture’ can be found (i.e. Y is not significantly correlated with Z) but do not entail scrapping the mechanism itself.

Gorski (Chap. 2) maintains that taking a mechanistic (not mechanical) approach is not surprising as this has ‘gone mainstream’ in the USA, despite its lesser popularity in Europe.⁴ Those working with generative mechanisms form a broad church and probably could sign up to Bunge’s ecumenical definition. ‘A mechanism is one of the processes in a concrete system that makes it what it is – for example, metabolism in cells, interneuronal connections in brains, work in factories and offices, research in laboratories, and litigation in courts of law ... Once hypothesized they help explain, because a deep scientific explanation is an answer to a question of the form, “How does it work, that is, what makes it tick – what are its mechanisms?”’ (2004a: 182).

However, as will be seen in the next section, ecumenism only goes so far, and divergences quickly surface. For example, compare the following:

- (i) Hedström and Swedberg’s statement that their analytical approach ‘seeks to explicate the social mechanisms that generate and explain observed associations between events’ (1998a, b:1).
- (ii) Andrew Collier’s view that a generative mechanism refers to that ‘aspect of the structure of a thing by virtue of which it has a certain power’ (1994: 106).
- (iii) Tony Lawson’s insistence that ‘the absence of spontaneously occurring closed social systems, necessitates a reliance on non-predictive, purely explanatory, criteria of theory development and assessment in the social sciences’ (1997: 35).

The first (i) seeks to explain connections at the level of events; (ii) refers to structural properties and powers, unacceptable advocates of (i); and (iii) rules out prediction of events in open systems, thus severing explanation from empirical observation, again unlike (i).

⁴Where arguments are often stated – or more often the practices of social scientists imply them – that these disciplines should be at least as preoccupied with the non-explanatory tasks of description, prediction and control. See Julian Reiss (2007).

Given these differences, it is significant that the present contributors elect to work largely within a Realist mechanistic framework, since there are now at least 24 definitions of mechanisms in social theory (Mahoney 2001). Thus, it is important to clarify in what this consensus consists, because it falls short of complete unanimity in the subsequent chapters and not everyone owes a debt to Roy Bhaskar's *Realist Theory of Science* (1975).

In Bhaskar's definition, 'a generative mechanism is nothing more than a way of acting of a thing' (Bhaskar 2008 [1979]: 51). The mechanism provides the real basis of causal laws, above, beyond and regardless of the presence or absence of statistical associations with outcomes at the level of events. In other words, the mechanism explains *how* a given correlation works, rather than merely *that* such an association is statistically significant. Sometimes they cannot be, at other times they entail the problem of 'confounders' – that a common cause may explain a correlation (Steel 2004: 59) – and finally the association may be spurious (such as those once found between the incidence of storks and birth rates). Thus, if we grant that there are good reasons for holding a generative mechanism to be real, causal laws deriving from their workings cease to be justified by patterns of events. It is the generative mechanism that supplies the real basis for causal laws. Nevertheless, no law simply expresses the universal manifestation of causal powers operating in the open system that is the social world. Explanation will be realist rather than dependent upon empiricism. As Gorski puts it, to none of our authors is explanation a matter of 'empirical association plus theory' (p. 24). Rather, any statistical connection detected in the flux of events itself poses a question whose answer will be partly in terms of generative mechanisms (Porpora forthcoming 2015: Chapter 2 'Do Realists Run Regressions?'), but mechanistic accounts have to work within the flux of the social order.

As social scientists we are acutely aware of the messy nature of this flux and also have a heightened suspicion about talk of 'social *things*' because of its Durkheimian resonance. We take no convincing that in the social order generative mechanisms always exist in the plural and thus are in interplay with one another, conjointly producing what actually happens in the world. Thus, we relax when Bhaskar sometimes refers to 'generative complexes' (e.g. 1979: p. 40 and 44) rather than 'things' and emphasises that for generative mechanisms, their specific '[t]endencies may be possessed unexercised, exercised unrealized, and realized unperceived (or undetected)' (2008: 184); they can thwart one another, nullify each other or occlude their respective workings. Our own project necessarily has to deal with such *multiple determination* because we ineluctably confront complexes of generative mechanisms. That is why no single *deterministic* account is found in this book and it is ultimately the reason why none of us confidently announces the advent of Morphogenic society.

By virtue of the generative mechanisms that contributors consider important, we venture their workings in full awareness that the tendential changes these could introduce in the global social order are ever capable of being trumped or trounced, amplified or nullified by countervailing tendencies. One, but only one expression of recognizing multiple mechanisms is that most of us regard the social order as a

relationally contested organization, shaped between those supporting and opposing (under their own descriptions) the working of particular mechanisms within a generative complex. This does not pre-suppose that those doing so have full discursive penetration of their social contexts, but it does suppose that these contexts furnish different motives (Porpora 1989) for acting 'so' rather than 'otherwise' for groups differently situated whom they differentially advantage or disadvantage. This is also one of the guarantors that no generative mechanism is ever held to be other than activity-dependent.

There is another hallmark distinctive of how we collectively conceptualize the generative mechanisms we advance, which pertains to our approach to explanation in the social sciences and not from under-labouring in the philosophy of social science. Nevertheless, it complements philosophical realism's insistence upon the 'context-dependence', 'concept-dependence' and 'activity dependence' of social forms. These are generic concepts that must be applied with direct *reference* to the specific social process(es) in question.

Thus, in the first Volume (2013 chapter 1) I coined the phrase that any adequate explanation in the social order comes in a SAC, meaning it must incorporate 'structure', 'culture' and 'agency' (under a theorist's own descriptions). This appears to be owned by our group with the implication that SAC would also characterize the generative mechanisms that are ventured by each of them, as is the case in the chapters that follow. It is extremely important because it distinguishes the generative mechanisms advanced by Realist social scientists and their collaborators from those employed by theorists of other persuasions; whose mechanisms do not bear the SAC hallmark. Let us take a brief tour of leading brands that abrogate this requirement.

1.1 Where Generative Mechanisms Are SAC-Lite in Conception

The social ontology endorsed by those employing 'generative mechanisms' exercises a regulative role over what elements may legitimately feature in them as well as what their ontological status is and which tasks they are held to perform. For those who are writing 'in general', rather than seeking to explain some particular social change, it proves impossible for them to eliminate entirely any element of SAC. However, various shifts and contrivances enable each element to figure in a pallid manner, presumed to be safe for the cholesterol level of the respective foundational ontology. These are what I call 'lite' versions, which come in three flavours: structure-lite, agent-lite and culture-lite. In all three cases, either incoherence or incompleteness (if not both) accompany this selective abstemiousness.

1.1.1 Analytical Sociology's Generative Mechanisms: Structure-Lite

Least space will be given to Hedström and Swedberg's structure-lite approach to generative mechanisms because this is critiqued by Gorski (Chap. 2 and 2009), Wight (Chap. 3) and by Donati (Chap. 4). However, it is clear from Hedström and Swedberg's definition that mechanisms themselves are not real but merely heuristic tools: that is, 'analytical constructs that provide hypothetical links between observable events' (Hedström and Swedberg 1998a: 13). Quite strong traces of both individualism and positivism mark this definition. Structure enters the picture only via the epistemic fallacies committed by lay actors; they are real only in so far as actors behave as if they are real. However, this version of the Thomas theorem cannot work for everyday life and nor does it help the coherence of this approach.

Firstly, it does not work for the ordinary circumstances in which people live, in matters such as preferences about neighbours and housing that Hedström has researched. There, the 'situational' is allowed entry because there is no context-less action, and obviously so when subjects are designating where and close to whom they would choose to live. Yet, what are the limits to the (undefined) notion of the 'situational'? If bricks and mortar are real, in what sense are the mortgages that enable the realization of a preference less real? (Or the income that enables the mortgage to be serviced, or the regulations, linked to controlling house price bubbles, about the multiple of one's earning power that governs its granting?). Hedström and Swedberg insist that 'there exist no such things as "macro level mechanisms"' (1998a: 24); these are always the products of lower level entities (an instance of what Gorski terms the preferential option for 'smallism'). Yet, here, we have a clear instance where the 'situation' of the population is pre-defined for them by non-illusory macro-processes: the houses already built and occupied.

Secondly, in their explanatory framework of 'Desires-Beliefs-Opportunities' (DBO), it is hard to accept that the final element, 'opportunities', is an 'analytical construct'. How, for example, can that be the status of the limitations imposed on geographical mobility within the EU? If one year someone's 'situation' denies them the opportunity of moving across a border, but the next year legally permits it, these are real constraints and enablements and mean a country has gained admission to the E.U. on a given date. The same difficulty attends this account as John Searle's treatment of the 'Background', as a kind of stage scenery, wheeled in and out when the context requires it for comprehensibility (Searle 1995: 129–42). Yet, the opportunity to move from one country to another is not about comprehension but rather constraint. Investigators need to resort to the latter to account for observable patterns of migration. Nevertheless, they cannot do so consistently if this background feature is held to be unreal but also contributes to the pattern observed by virtue of its real powers.

In short, structure-lite will accommodate epistemological realism but balks at ontological realism. It thus unduly restricts the generative mechanisms that are entertained and consequently hamstrings its own explanatory programme which, to be coherent, needs to make systematic resort to those macro-powers that shape such things as opportunities.

1.1.2 Pragmatism's Generative Mechanisms: Action-Lite

Interestingly, Neil Gross maintains that he is advancing 'a more solid action-theoretical foundation' for generative mechanisms than that furnished by Hedström and Swedberg's D-B-O formula (2009: 359). Nonetheless, I regard it as an exemplar of an action-lite approach. This is because although Gross claims direct descent from the four great American pragmatists he presents a strangely denuded version of their theories of action. It strips out reflexivity (central to both Peirce and Mead), self-monitoring (vital in James) and human imagination (important to Peirce in enabling actors to detect problems rather than merely responding to exigencies). Hence, Gross's spare and bare definition of a social mechanism: 'Pragmatists would view social mechanisms as composed of chains or aggregations of actors confronting problem situations and mobilizing more or less habitual responses' (2009: 368).

Before examining this definition's components, it is necessary to ask what job this new excursion into mechanisms on the part of pragmatism presumes to do for social theory – or for neo-pragmatism.⁵ Its theoretical contribution is meant to provide a superior 'mediatory' account for why the empiricist $X \rightarrow Y$ association obtains at the level of events, since 'existing accounts of social mechanisms are problematic because they rest on either inadequately developed or questionable understandings of social action' (2009: 358). Instead, 'action should be conceptualized in terms of social practices', providing 'a more solid action-theoretical foundation than existing approaches recognize' (359). Thus, it is quite fair to assess this contribution in its own terms – of conceptualizing action.

Action to Gross is fundamentally a stream of socially learned, tacit habits (Dewey's 'acquired pre-dispositions') punctuated by creativity when subjects confront exigencies with which this repertoire of routinized responses cannot cope. Hence, the formula that action 'involves an alternation between habit and creativity' (366) is presented as the conceptual advance, since the 'habituality-creativity continuum for pragmatists is meant to encompass rather than substitute for other forms of action' (368), for example, rationality is also counted as a habit. There are two main problems here; (i) is this indeed an all-encompassing formula for action, and (ii) what makes for a problem situation.

⁵What neo-Pragmatism will get out of this redefinition of action ('action should be conceptualized in terms of social practices' (2009: 358)), is to become part of a flourishing new tendency (the practice-turn has been severely and brilliantly criticized in Porpora's latest book, forthcoming 2015, Cambridge University Press), and perhaps to lead it if Bourdieu can only be deposed.

(i) Gross shuns the notion of *motivated action*. He shares Joas's opposition to 'the tyranny of purposefulness' (whether normative or rational), rejecting both the presumption of goals prior to action and 'the actor's basic autonomy in the setting of goals' (Burger 1998: 109). Like Joas too, 'even acts of the utmost creativity assume the pre-existence of a bedrock of underlying routine actions and external conditions which are simply taken as given' (1996: 197). This foreshadows the minimization of both personal and social properties and powers that make the claim to encompass 'other forms of action' contentious. It places a stranglehold upon personal and collective powers of *prior commitment* to any concern because the 'interactive situation is *constitutive* of goals and actions' (Mouzelis 1998: 492). Equally, since the argument remains entirely at the situational level, macroscopic shifts and particularly the contextual discontinuities and incongruities that intensify with modernity do not significantly affect this theorization of a seamless situational flow, for which Gross himself once criticized it (1999: 341–2).

Not only does this 'flip-flop' between habit and creativity that I have critiqued elsewhere (2011) fail to 'encompass' other social theories of action but it also denies important parts of the much richer pragmatist tradition. Effectively, Peirce (Archer 2003: 64–78) is erased from the canon.⁶ Peirce was an advocate of our 'personal powers', especially those of our 'moral natures' which should result in the self-monitoring of our habits, through reflexive 'inner conversation', rather than their automatic replication.⁷ This involves an internal struggle on the part of the committed and innovative 'I' to overcome the inertia of the habitual 'Me' (or Critical Self), as Peirce pictures in his famous courtroom analogy where the Advocate of Change marshals his case against biographically developed dispositions. Imagination also plays a major role in action through the 'power of preparatory meditation' (1958: 286), because such 'musements' are prompted not only by obstacles that impede the routine accomplishment of courses of action but also by subjects building their own castles in the air and then attempting fallibly to realize them on the ground (Davis 1972: 63). Finally, the more social variation and cultural variety *available* for actors to ponder upon reflexively, which Colapietro calls 'booty',⁸ the greater the stimulus to innovative commitments.

Peirce's understanding incorporates both irreducible personal powers and also distinct social properties and powers, thus being compatible with realism's stratified ontology. Conversely, Gross works with a 'flat' social ontology made up of a myriad of occurrent 'situations' (unlike Mead). Thus, in response to (ii) 'What makes for a problem situation', the answer is never the individual or the research team, yet both

⁶ Kilpinen noted Joas's 'curious reluctance to assimilate the ideas of C.S. Peirce' (1998: 41).

⁷ 'you are well aware that the exercise of control over your own habits, if not the most important business in life, is at least very near to being so' (cited in Davis 1972: 111).

⁸ Colapietro maintains of Peirce: 'When I enter into the inner world, I take with me the booty from my exploits in the outer world, such things as my native language, any other languages I might know, a boundless number of visual forms, numerical systems and so on. The more booty I take to that secret hiding place, the more spacious that hiding place becomes... the domain of inwardness is not fixed in its limits; the power and wealth of signs that I borrow from others and create for myself determine the dimensions of my inwardness'. (1989: 115–6).

can be important when they question a habitual treatment (e.g. in medical practice). Instead, the answer is always social, but it is not allowed that in some social formations (morphostatic ones) habitual action suffices more frequently than in those subject to intensive change (morphogenetic ones) where habit does not even furnish a basis for many activities (such as computer programming).

Indeed, Gross makes a curious but honest admission for someone writing about mechanisms, namely that ‘questions of social-structural production and reproduction ... have not been a major concern of scholars working in a pragmatist framework’ (2009: 368). The exclusive focus upon ‘aggregate’ action in the definition that follows seems to be responsible because no form of relational contestation can be ‘encompassed’ by the formula of alternation between habit and creativity.⁹ However, the very inability of this pragmatist theory of social mechanisms to deal with this book’s key concern about the transformation of modernity into a distinctively different social formation, is oddly represented as its strength. Gross maintains that ‘the very thinness of the model at the meso- and macro-levels gives it a flexibility and range lacking in other approaches’ (2009: 368). The only way this can be justified is by resort to homology, which is the path Gross takes. ‘Social mechanisms that affect collective actors (e.g. firms, states, or organizations) *can be analysed in the same way*. Collective actors also face problem situations and respond in habit-bound, culturally mediated ways, and social mechanisms involving collective actors consist of *chains or aggregations of such responses*’ (2009: 369 my italics). I presume that our contributors – all of whom work with a stratified social ontology – will deem this to be ‘action-lite’.

1.1.3 Bunge’s Generative Mechanisms: Culture-Lite

This third approach appears closer to the realist conception of mechanism than the previous two because it rejects reductionism, correspondingly endorses emergence and supports multiple determination, including the possibility of conflictual relations between two or more mechanisms, termed ‘meta-mechanisms’, (Bunge 2004a: 182–7). The latter are compatible with my own concepts of, for example, ‘contingent complementarities’ and ‘constraining contradictions’ (fully worked out in Archer 1988 and used in our previous two volumes). A ‘mechanism is one of the processes in a concrete system that makes it what it is’ (2004a: 182) and this warrants our saying that this system would be different without it. So far so good, but we then encounter the qualifying statement that ‘mechanisms are processes in concrete (material) systems’ (2004a: 191). This materialism results in Bunge’s generative

⁹Gross attempts to do this through adapting Tilly’s (1995: 42) ‘repertoires of contention’ to be ‘understood as a set of habits or practices enacted collectively by members of a group to make political claims and attempt to resolve problems they may be facing, from political disenfranchisement to economic marginalization’ (2009: 371).

mechanisms being ‘culture-lite’, a criticism voiced a decade ago by Colin Wight who dubbed it ‘materialism gone too far’ (2004a: 297).

Bunge’s resolute materialism is advanced in overt opposition to Platonic idealism and Popper’s ‘World 3’, whose ghostly notions populate the world with ‘ideas as well as concrete things – without explaining, though, how immaterial items could possibly interact with material ones’ (2004b: 378). However, this is what leads him to conclude that there are no such things as ‘cultural mechanisms’,¹⁰ for reasons that invoke Gorski’s criticism of the durable seventeenth century mechanical concept of the ‘mechanism’ as matter-in-motion still overshadowing contemporary conceptions. It is also at variance with Bunge’s own definition of a social system and ultimately results in his curtailing the part played by culture in the maintenance and change of social forms.

To Bunge: any social ‘system is a complex object whose parts and components are held together by *bonds of some kind*. These bonds are *logical* in the case of a conceptual system, such as a theory, and they are *material* in the case of a concrete system, such as a family or a hospital’ (2004a: 188 my italics). Hence, a belief, theory or ideology can help bond a social organization. Why then do the logical relations between ideas (ones of contradiction and complementarity) not constitute ‘cultural mechanisms’ (for example, when two sets of opposed ideas are respectively legitimating and challenging the same social form)? Because, he claims, ‘there are no mechanisms in the signs *considered in themselves*, apart from their users.’ (2004a: 188, my italics). Yet, he has already granted logical relations a causal role in social bonding, so what prevents them from operating as mechanisms? Seemingly, this is the phrase ‘apart from their users’, but in *themselves* the same caveat would have to attach to material resources: land, minerals, plants and animals.

In fact, Bunge is not laying the trail followed by many others¹¹ where all knowledge and its effects lie inside our contemporary heads. He approvingly cites Donald (1991) who deems ideational texts to be the ‘external storage system’ of every literate culture and Bunge states ‘[w]e make use of this storage every time we read a text or listen to a radio programme’ (2004a: 372). I agree. Unless people resort to the Universal Archive (as I term it), books etc. simply gather dust. That is very different, however, from denying that when agents do resort to them and use them, agential assent or assertion plunge them into the contradictions and complementarities that logically exist between different corpuses. This would concede my main point, which is not that ‘ideas exist on their own’ in Plato’s mythical domain, but that human artefacts, unlike marks left on stone by weather or erosion, retain their humanly inscribed intelligibility regardless of whether or not any contemporary knowing subject consults them or is even aware of their existence. Instead, Bunge maintains that in society, ‘it is only through their materiality that they [ideas]

¹⁰He maintains that unlike those that are materially grounded, ‘By contrast, the conceptual and semiotic systems have compositions, environments and structures *but no mechanisms*. The reason is that changeability (or energy) is the defining property of matter’ (2004a: 191–2).

¹¹This debate about the social ontology and causal powers of culture has recently been re-run between me and Dave Elder-Vass (2011).

can have an effect on concrete systems such as schools and armies' (2004b: 374), presumably through books and manuals. However, it is not the physical object (covers and pages) that exerts this influence; *qua* material book it could only have an effect if thrown at the pupil or tripped over by a cadet, but not culturally.

In short, Bunge's oscillation between the Cultural System and its logical relations and Socio-Cultural interaction and its use of ideas to influence social relations, means he denies culture the powers to operate as a generative mechanism and thus downplays it because of his rightful dismissal of Platonic Idealism but over fearfulness about its resurgence.

1.2 Conceptualizing Mechanisms in Part I

This discussion of the SAC-lite deficiencies of some popular current conceptions of generative mechanisms synthesizes many of the reservations held by contributors to this book. It also serves as an overview to Part I whose authors voice criticisms that are more specific. In Chap. 2, Gorski's theme is the enduring and baneful influence of seventeenth century 'physicalism' upon contemporary conceptions of social mechanisms. By physicalism he refers 'to the tendency to conceptualize [social] interactions in terms of physical contact and energy transfers' (p. 42). This 'deflationary' tendency – treating the working of mechanisms as the result of 'matter in motion' – he highlights for the United States, but this induces a reserve towards generative mechanisms as treated on the other side of the Atlantic. How could Bhaskar's treatment of verbal requests, such as 'Pass the salt please', used explicitly to illustrate 'mind over matter' (Bhaskar 1979: 106), be other than an exception to the 'physicalist' heritage? The same is the case for his extended discussion of the causal influences of 'absences' (1993). How could my own trilogy on Reflexivity (Archer 2003, 2007, 2012), as the mediatory mechanism through which structures influence agents' courses of action, be construed as a 'physicalist' link? (Moreover, how could anyone interpret that as other than a synchronic influence?).¹² However, even with regard to the U.S.A. alone, Gorski concludes that we should press on working with generative mechanisms because nothing in late modernity persuades that 'mechanisms and structures have all dissolved into "contingencies" and "flows" whose only properties are "risk" and "acceleration"' (p. 43); the exact conclusion reached in our last Volume.

¹²Gorski seems unduly influenced by the erroneous commentary provided by Elder-Vass (2010), who fails to appreciate that 'structural conditioning' is not an exclusively historical (diachronic) phenomenon since there is never an unstructured world ('all the lines are continuous') nor is there ever an absence of structural conditioning (Archer 1995: 76). My '*analytical dualism*' forms part of the *explanatory programme*, it is a very useful contrivance for practical theorists attempting to explain something in particular, i.e. break it up into analytical phases to explain the problem in hand, but it is never – even temporally – ontological or philosophical dualism (See also Archer Chap. 7 in this volume).

Colin Wight (Chap. 3) gives an economical account of (British) Critical Realism's approach to generative mechanisms and is in agreement with the general historical backdrop that Gorski presented: the problem 'is that the concept of mechanisms was largely developed in the context of the physical, not the social sciences. Thus, when the term was transferred into the social realm it brought with it its implicit concepts. This explains why concepts such as reductionism, generality, uncovering, mechanistic, and deterministic are often closely associated with the concept of mechanism. This way of thinking makes some sense in the physical sciences but not in the social sciences' (p. 50). For our collective work together, it also helps that he stresses two aspects of the social world: that social relations always, in part, constitute social phenomena and that it is frequently the particular conjunction of multiple interacting mechanisms that explains any given outcome.

These points are illustrated from international relations, where the co-existence of cyber communication and its uses for political mobilization *together with* the decline in political trust is identified as the primary mechanism driving change in global politics. To Wight, this generative mechanism constitutes a positive feedback loop between the two elements. Here, he and Pierpaolo Donati (Chap. 4) enter into an interesting internal debate. Whilst Wight, like most realists, works within the framework of positive, negative and occasionally forward feedback, Donati wants to persuade us that this should be supplemented by the introduction of specifically 'relational feedback'.

Donati begins with the now familiar rejection of mechanisms tied to aggregates of individual responses in favour of 'relational mechanisms' that work through existing, emergent social relations and elaborate them into a new form of relationality, following the morphogenetic sequence. For example, under modernity's capitalism, primary agents sharing the same relations to production became corporate agents through unionization. Initially, capitalist relations generated common feedback between each worker and employer, but this vertical relationship became modified by the elaboration of a new horizontal associative relation, the union, that transformed industrial relations through the new causal powers it introduced. That change depended upon the development of relational reflexivity through which workers deliberated upon improving their conditions by collectively reconfiguring their relations.

This process is termed 'relational feedback' and the above scenario seems uncontentious. However, realists who are accustomed to dealing with relations between relations may question if these entail a different type of feedback. Donati argues that it does involve a distinctive 'relational code' that replaces the binary code (acceptance/non-acceptance), of the feedback process, because of the 'fuzzy logic of relationality' (p. 78) that does not work in terms of 'yes'/'no'. Undoubtedly, it is the case that the agents involved are exploring new forms of relational combination that could be more beneficial to them and do so uncertainly. In the above example, the nineteenth century British workforce 'experimented' first with Luddism, then with 'moral force' Chartism, then 'physical force' Chartism and finally with forming one grand, national consolidated Union, prior to developing separate craft-based unions. At no point was the industrial workforce balloted, as it were, to say 'yes' or 'no'

about the new combinatory forms just listed; these were simply tried and tested but failed to make sufficient impact on industrial relations. However, does this mean that the workforce employed a ‘different logic’ from that of positive or negative feedback?

On first reading, I resisted this because three canonical principles of classical logic (‘negation’, ‘identity’, meaning something cannot be ‘p’ and ‘not-p’, and of ‘non-contradiction’) are not optional. As Lukes (1979) maintained, they are necessary if we are to communicate anything or be able to think at all (which includes reflexive deliberation). This I consider non-negotiable: formal logic is not interchangeable with social ‘codes’ of procedure. However, Donati is actually concept-stretching and closer reading shows he is treating ‘logic’ as ‘rules’ that connect the components of any social relationship. This is a question of normativity – not of formal logic – of how novel norms come into being and gain recognition such that union membership, for example, becomes normal and unions play a regular part in industrial relations. Yet, precisely because such practices each require a {‘yes’/‘no’} of acceptance or rejection, these relational experiments sooner or later become matters of positive or negative feedback as Donati agrees. Normative change is an under-theorized aspect of morphogenesis and I read this chapter as pointing towards the next Volume in the series rather than as a claim that fundamental logical principles are optional.

1.3 Venturing Morphogenetic Mechanisms in Part II

Since mechanisms in general account for how things work, it follows that if we are deliberating about the possible advent of a Morphogenic society that we must focus collectively upon the specific generative processes that could bring it about, such that it works in a manner justifying the term ‘morphogenic’. From the previous Volume (2014) it is clear the concept can cover a variety of relational organizational forms. It takes more than an intensification of morphogenetic changes and the receding of morphostatic sources reproducing stability to warrant using the concept. That ‘formula’ quickly short-circuits into the quasi-empiricism of theories about ‘acceleration’ or ‘risk’ society, which are inadequate to specify the constitution of a new social formation. Instead, to us the concept of Morphogenic Society is also eudemonistic: which can be characterized succinctly as a social formation whose relational organization generates ‘win-win’ outcomes, potentially for all, rather than the winners and losers of late modernity. Hence, we are unapologetically normative and make no claims to be ‘value free’ – a goal as unattainable as it is undesirable (Porpora [forthcoming](#) 2015).

On the contrary, the Morphogenic Society also represents a ‘concrete utopia’,¹³ asking what mechanisms show signs of transcending that which is currently damaging in late modernity and replacing these with realistic alternatives, where the opportunities

¹³Introduced by Ernst Bloch (1959).

generated by intensive change are beneficial to the many rather than the few. Hofkirchner (Chap. 5) overtly uses this ‘concrete utopia’ as the yardstick that enables him to evaluate general theoretical approaches (positivism, interpretivism, postmodernism) and to find the implicit mechanisms of change they endorse as wanting both sociologically and normatively. Thus, he homes in on the interplay between technology and society and lays out a variety of panoramas in which they generate good or evil. Rightly, I believe as does Wight, Hofkirchner maintains that: ‘Informatisation, the penetration of society with ICTs, is not a “mechanism” per se that leads to information society ... The techno-social system can reinforce particular dysfunctionalities, quantitatively; it can spawn new dysfunctionalities, qualitatively; and it can support the mitigation, and even elimination of those dysfunctionalities and the advent of new functionalities.’ (p. 103). Upon what do these branching options depend, other than a pervasive, indeterminate contingency that defies mechanistic explanation?

Hofkirchner’s basic response remains ‘self-organization’, but he now specifically defines this as the processes by which conflicts of interest, under certain conditions, give way to a mutually beneficial synergism. In other words, he does not reject the portrayal of historic change to date as a matter of the ‘relational contestation’ of social organization based upon the objective interests of conflicting groups (Archer 2013). Indeed, he regards ‘the obstacle to ... the requirements for assuming a human future is self-interestedness.’ (p. 104).¹⁴ Ultimately, this could be transcended by a mechanism that generates synergetic ‘win-win’ opportunities (structural) and social reintegration as unity-in-diversity (cultural) by the gradual shift (agential) from relations of antagonism (based on contradictory interests) to ones of agonism (grounded in contrary identities) and then to synergy (co-operative relations).

On what does the engagement of such a mechanism depend? Upon the spread of ‘relational reflexivity’ in which courses of action become orientated to emergent ‘collective goods’. Some agents recognize their value as stemming from the cross-fertilization of activities and develop collective communication to promote such benefits (the commons) through non-competitive social relations; at which point co-operative ‘synergism may be one step away’ (p. 109). Together these form the composite mechanism. There is no guarantee that such dynamics will engage: ‘Given the predominance of structures that embody hegemony and the uneven distribution of power and wealth, evidence of successful applications is rare. However, there are more opportunities than expected *prime facie*.’ (p. 109). Multiple determination means the working of this mechanism is contingent upon others and its outcomes carry no guarantees, but it is the causal route leading from Information to Morphogenic Society.

Hofkirchner has sketched his overarching mechanism on the biggest canvas. It leaves plenty of space for other contributors to signal further countervailing

¹⁴Thus matters could go either way and the following sentence could have been written by either of us: ‘rentier capitalism of the Microsoft type obstructs the questioning of intellectual property rights. On the other hand, the rise of mass self-communication enhances opportunity for change’ (p. 104).

mechanisms that suspend its powers (Lazega), delay any definitive outcome because of the intensity of relational contestation (Archer), or introduce a patchwork of results deriving from agential resistance to or conditional readiness for the opportunities presented by intensified morphogenesis (Maccarini).

Lazega is distinctly dystopic in accentuating how the digitalization of social control (through the spread of body captors and large relational databases) by late modernity's vested interest groups – in the market and state – is a mechanism¹⁵ that potentially threatens the end of democracy. Its overall effect is to insert more bars into Weber's 'iron cage of bureaucracy' through its workings at the meso-level, a part of stratified social reality that never features in Hofkirchner's theorizing.¹⁶ Ironically, however, as these top-down methods of control and surveillance strengthen at the expense of social integration and bottom-up pressures from civil society, the meso-level itself weakens as a source of mobilization and normativity.

Digitalized social control is a mechanism through which structure and culture amplify one another through positive feedback, by exploiting the 'contingent compatibilities' between them and thus generating more variety and further applications. The process is undoubtedly morphogenetic but is on a slippery slope away from the Concrete Utopia; by generalizing new rules inducing certain types of behavioural conformity whilst demonizing other activities (on the smokers-as-pariahs model). Unwanted practices are cheap to regulate because conformity is policed by the agential targets themselves and by using their relational profiles to detect incipient counter-organization.

Yet, how did body captors and profiling gain a grip in the first place? How did the long haul from monitoring soldiers on the battlefield migrate throughout society? Lazega's answer is very close to my analysis (Chap. 7) of those making free gifts of themselves to *Facebook*; for fun or fear. First, lure joggers to sport a digital wristband all day with the promise of lower health insurance premiums and monitoring their well-being, then reinforce it by bombarding their profile of friends and leave them to it, thus passing the costs downwards and the control upwards. As such practices spread from battlefields, to hospitals, sports, gaming, workplaces and households, both the bottom-up production of common goods declines as top-down Orwellian control (a term used by both Lazega and Hofkirchner) increases. Consequently, this undermines popular influence within social institutions along with the probability of ordinary people exercising institutional leadership.

The feedback between downward and upward causation spells an increasing asymmetry favouring the former, by strengthening bureaucratic regulation

¹⁵Lazega writes: 'These technologies could be considered to be cultural/structural indicators of generative mechanisms reconfiguring late modernity' (p. 116).

¹⁶This uses only the macro and the micro levels and one puzzling result is that 'social relations' are detached from agents/actors and placed above the macro-line. Although everything is macro towards some things and micro towards others, it seems conceptually odd to dissociate 'agents' from their relations, which are (partially, at least) constitutive of them, even for the analytical purposes this serves. Hofkirchner certainly avoids endorsing Giddens' 'central conflation', but omits the complications that incorporating the meso-level would entail for his elegant modelling. Lazega's message is that he also excises a stratum where much of the action takes place.

(co-ordinating behaviour without any resort to personal relationships) and producing a standardization of life that separates conformists from non-conformists. If access to health care and other social benefits is conditional upon conformity, it creates a new class of the excluded and inequality is further exacerbated. As voluntary members of social networks, agents are recipients of ‘mobilizing’ messages without any of them commanding an overview. Google alone commands this vantage point. At the same time, the Public Authorities provide no resort against surveillance as they have joined it as major players.

This brief summary of Lazega’s mechanism, potentially culminating in the end of democracy, seems to place him at variance with the extension of democratic regimes and control presented by Wight in his discussion of international relations (Chap. 3). The generative mechanism Wight ventured stems from the confluence of increased cyber communication and declining trust in politics of the state. There could be several reasons rendering this an apparent contradiction between them:

- (i) The two theorists are working at different levels; Lazega focuses on the meso-micro interface whilst Wight concentrates upon international relations. Given a stratified social ontology, there is no reason to suppose that there is homology between strata such that the same mechanism(s) predominates in all (although their outcomes will necessarily intermingle).
- (ii) Empirically, it is quite possible that the digitalized controls Lazega discusses have not yet penetrated to the same extent the (predominantly) Islamic world from which Wight draws many examples.
- (iii) Whilst Lazega is dealing with the potential undermining of long established democracies by digitalized bureaucratic surveillance, Wight points to instances such as Wikileaks that diminish trust in them, but these two propositions are quite complementary in outcome.

However, there is a more obvious accord between Lazega and Archer. He deals with the overt and largely intended control of Primary Agents, whose effect is an individualization that represses the formation of Corporate Agency. She concentrates upon the ‘double morphogenesis’ in which those who 30 years earlier might have been active unionists, political radicals, eco-warriors or pop-protestors have been transformed into passive agents – by political centrism and an economics of ‘there is no alternative’ – becoming willing collaborators of the social media. The result is identical and the processes reinforcing. The pre-existing deficit in social integration is their cause and its intensification their consequence.

Archer works across the macro-, meso- and micro-levels, locating the mechanism fostering morphogenesis in the ‘contingent compatibilities’ now characterizing relations between culture and structure. It is manifest in the growing interdependence developing between the new forms of globalized capitalism and the innovations of digital science. However, this is a synergy between the operations of two divergent sets of interests: material and ideal. Synergistic collaboration is necessary to both parties; for the profitability of multi-national and finance capitalism but equally for the diffusion of digital innovations (see 2013 Chapter 5). Therefore, this is a tense collaboration – very different from Hofkirchner’s ideal of co-operation – in which

the two promote morphogenesis of very different kinds, seeking to shape global society in divergent ways. Whilst neo-capitalism fosters ongoing market competition, informatics encourages a diffusion of digital advances as a 'commons' of new opportunities.¹⁷ In other words, this is the form of *relational contestation* in late modernity. It does indeed lead to variety stimulating new variety, accentuating further morphogenesis, but without defining the global social formation it will take.

The cause of protracted contestation, without resolution in sight, is the effect of the 'double morphogenesis', which transforms agents (by re-grouping them) in the self-same process through which they bring about social transformation. Not only have new Corporate agents become delineated but, simultaneously, an increasing proportion of those in the developed world continue to swell the ranks of Primary agents who neither articulate aims nor form any organization to pursue them. Despite the frequently vaunted role of the Internet in facilitating social mobilization (Castells 2012), it seems to me considerably more influential in absorbing this fragmented collectivity on an individual basis into the distractions of social media.

In turn, their lack of social integration is exacerbated and their potential for coalescing into a social movement(s) diminishes. Thus, rather than the new Primary Agents breaking the deadlock between the Corporate Agents pressing on with market competition (through commandeering intellectual property rights *inter alia*) and the 'digital diffusionists' seeking to universalise the informational 'commons', they become agentially passive. Since these subjects tend to practise individual Expressive Reflexivity, riveted on the present, this incapacitates them from developing a Collective reflexivity capable of devising future courses of collective action. These effects of the 'double morphogenesis' mean I remain agnostic about how the relational contestation will be resolved, but also convinced that a new global social formation approximating to the Concrete Utopia is not around the corner.

Maccarini asks a different but important question. Supposing, for the sake of argument, that the hypothetical transition to a Morphogenic Society is correct, where would it start and what would be the first signs of it coming into being? The contributors were critical of theories positing 'clean breaks' (see Chap. 7) and we concurred that the messiness of historical transitions defeats empirical indicators. Thus, it is also necessary to theorize about the explanandum because the current intensification of morphogenesis will not produce uniform results in different social sectors or parts of the world. This is what Maccarini asks: 'where are we along the path that is possibly leading to a complete social reconfiguration'? He seeks to answer this with reference to 'some of the shapes into which the morphogenic process is crystallizing' (p. 167) and uses as his litmus test whether or not such 'environments' are 'starting to reveal anything like a latent pattern beyond purely contingent convergences' (p. 165).

'Turbulence' has become a popular catchword in sociology for the experience of intensified morphogenesis and exponential increases in variety whose quintessential

¹⁷As the late David Lockwood maintained (1964), certain forms of social relations are implicit in particular modes of production.

non-predictability appears beyond control.¹⁸ When ‘hyperturbulence’ ensues some organizational ‘environments’ seek to protect their (perceived) limitations in adaptive capacity by partitioning themselves against the increasingly challenging complexity surrounding them. By forming *enclaves* members selectively protect their shared domain from external demands and incursion. Those regarded as a threat are repulsed, as shown by the European Union becoming a bounded space that members defend against non-members, unless these meet specific requirements in terms of economic performance and cultural values. Gated communities perform the same protective partitioning at the meso-level. A somewhat different quasi-morphostatic niche is the *vortex*, where the demand for skills and resources is such that outsiders are not excluded, but must pass tight border controls and keep their social distance once inside, as in migration policies throughout the developed world.

The argument is subtle, but what Maccarini is proposing is to identify the morphogenetic ‘hot spots’ by means of organized reaction-formation against them. This is easier to do because protective prohibitions are announced and policed, unlike the silent invitation issued by novel opportunities, addressed to no one in particular. In other words, ‘the creation of “walled systems”, albeit internally dynamic, contradicts the expansive, diffusive logic that characterizes freewheeling morphogenesis’ (p. 170). To put this nascent proposal to substantive use – and Maccarini does not suggest that we should – it would be necessary to disambiguate its defining *defensive* nature from both its own justificatory rhetoric and also from other forms of restrictive practices (such as the limited liability company discussed by Lawson or intellectual patents by Archer) that are strategically *competitive*.

1.4 Mechanisms and Morphostasis: Powers of Life or Death in Part III

Are we searching for *different* mechanisms to explain why some parts of the social order are more resistant or resilient to change than others? Apart from their substantive differences, I will argue that they share the same form as morphogenetic mechanisms. When Porpora asks ‘Why Don’t Things Change’ (Chap. 9), the answer he seeks is what explains negative rather than positive feedback. He first considers whether or not single properties such as spatial distance, that is real and has causal influence, can count as mechanisms but concludes, as I do, that it is indeed a cause (in both commerce and caring) but to term it a generative mechanism adds nothing. It would be worse than simply redundant because the referents of social mechanisms are to ‘mixtures or compounds’, which spell out Bhaskar’s references to ‘generative complexes’. Both incorporate the full array of SAC features, meaning they are formally similar to those accounting for positive feedback. If so, this is an important

¹⁸Hence the familiar tropes about ‘runaway society’, ‘risk society’ and the ‘juggernaut out of control’, all of which are drawn from the experiential level.

statement because in cases where there is less change than might be expected, the simple pragmatist resort to inertia based upon habit is inadequate.

Porpora's 'test cases' of resilient stasis include U.S. military imperialism in Latin America (during which Regan was re-elected); continuation of the human actions and forces exacerbating global warming; opposition to *Obamacare*; and the dilatory response to global hunger. Despite their substantive differences, the explanation of stasis rests on generative mechanisms that share common features regardless of some being (metaphorically speaking) 'mixtures' and others 'compounds'. Oversimplifying:

- (i) agential decisions, choices or concerns are crucial but are crucially made under social conditions and the alternatives shaping them
- (ii) the structural element consists in enduring vested interests that serve to compromise human normativity, compounded by political disempowerment of the electorate
- (iii) the cultural element derives from the 'macro-moral disconnect', that is, the privatization of morality and religion, as a 'culturally deactivating' process that confines ultimate concerns to the limited horizon of friends and family.

What unites the cases examined and accounts for the slowness of change is 'a fused mechanism of inequality and market forces', explaining *both* morphostasis but also the continuation of morphogenesis because, paradoxically, if 'Morphogenesis is produced by a conjuncture of mechanisms, then morphogenesis continues only so long as such a conjuncture remains in place. And staying in place is what we mean by morphostasis' (p. 200). For the mechanism I present (Chap. 7), I fully agree and this 'compound' makes radical change a long drawn out affair.

Similarly, Tony Lawson asks how over a 400 year period the modern corporation came by its extraordinary powers and why they continue without sign of diminution. Initially, in Chap. 10, he appears to differ in three ways from Porpora. First, his notion of the corporation 'being positioned' seems a rather passive process (reinforced by use of the passive voice). Second, it is not immediately clear that his discussion of the powers possessed by the contemporary company are the product of a 'compound', one compounded through a long course of relational contestation. Third, is his pessimism about a change in this state of affairs being conceivable.

Significantly, neither Porpora nor Lawson refers to 'necessary relations' needing to maintain between the entities making up a 'compound' – that constitute the generative mechanism keeping outcomes on the same tendential track. Nevertheless, it seems to me that Lawson is talking about a social phenomenon that depends, at the very least, upon relations of asymmetrical necessity.¹⁹ Fundamentally, without necessary relations between the nascent corporation and the law the company could not have become or be possessed of the powers it enjoys and exerts. Specifically, it is this necessary relationship that enables corporations successfully to engage in tax avoidance, to establish subsidiaries where there are low tax regimes

¹⁹ See Andrew Sayer (1992: 89–113) for a clear explanation of 'necessary relations' be they symmetrical or asymmetrical.

(and wages), to escape legal and financial liability for their doings etc. However, I want to stress that it does not do so as a lone entity.

Let us approach this by asking what structural conditions made and continue to make this possible. Lawson's answer is that the incorporated corporation is 'positioned' in society as a Natural Person and a Juridical Person, hence a legal fiction lies at the root of its advantageous position. However, acquiring this was not arbitrary or passive and does not bear comparison with the author taking a pebble and positioning it as his paper weight.

Indeed, he states that 'the situation that has emerged was in no way natural or inevitable, and it was certainly not uncontested' (p. 220). Without the steady granting of these legal rights over the centuries and to date, thanks to the complicit support of the Crown and Parliament, this situation would not have arisen or amplified in scope over 400 years. Thus, the corporation's position was not owing to a passive process but to a powerful alliance and a 'mixture' strengthening over the years. However, what explains the consistent overcoming of resistance during such a long time span?²⁰ Clearly, the Crown benefitted when it recognized the English East India Company as the first UK joint-stock company operating for-profit; so did Gladstone's Liberal Free-Traders, because this corporate status enabled the financing of the canals and railways. Thus, it seems to me that a (necessary) corporate-legal combination underpinned the creation of the 'legal fiction'. Indeed, as Lawson states 'the legal system now in effect works as a positive feedback mechanism' (p. 223) expanding the power of companies, such as the capacity to have legal immunity from the doings of their subsidiaries.

Certainly, I agree with Tony Lawson that contemporary efforts to transform the relations between the two institutions would meet with the full force of corporate power (p. 229); contestation would intensify. Nevertheless, it is to the legal system that most look for transformation or at least moderation of the corporation, for example into a more pro-social stakeholder conception of the firm, whilst others seek transformations from within and still others from building up the Third Sector without. In these instances of opposition, today's corporations are not seen as beyond control and cannot be unless relational contestation were to be entirely and indefinitely suspended – as has never been the case for a social institution – granted a sufficiently long time span.

Remote as the moderation let alone downfall of capitalism may seem, in the final Chapter, Al-Amoudi and Latsis raise an important and valid theoretical point, namely that morphogenesis alone does not account for the disappearance of social forms. That is, it cannot simply be assumed that morphostasis retreats as morphogenesis intensifies, because it does not contain an account of 'morphonecrosis'. Yet, every instance of social transformation begs a series of questions about 'which features of extant social forms disappear or survive in some vestigial form' (p. 232).²¹

²⁰ 'In particular, from the outset, and regularly since, the idea of granting legal-person status to profit-seeking communities has been severely resisted' (p. 205).

²¹ As Marx wrote in the *The German Ideology* (McLellan 1977: 181): 'the various stages and interests are never completely overcome, but only subordinated to the prevailing interest and may trail along beside the latter for centuries afterwards'.

Both do happen and sometimes to the same social form. After the French Revolution the titled nobility disappeared as a privileged Estate – not overnight, for the white flag of the Bourbons was still being waved 80 years later – but the nobility do linger on vestigially today.

The two authors argue that ‘to pronounce a social form ‘dead’, one must refer to some specific emergent level of organization, and demonstrate that it has ceased to function or exist’ (p. 235). In the case of the titled nobility in France, this was the severance of its relational organization with legal privilege. However, Al-Amoudi and Latsis are not looking only for exemplifications, indeed they provide one in the case of the demise of life-long employment. Instead, they seek what Wight specified as an intrinsic part of theorising about mechanisms, namely an ‘indication of what the expected outcomes might be’; and that this entails theorizing the conditions under which ‘morphonecrosis’ would be the outcome.

What is interesting is that Al-Amoudi and Latsis situate their conditions in the midst of the relational contestation of organizational forms, or ‘agonistic processes’ as they call them (not making Hofkirchner’s distinction between ‘agonistic struggle’ between contraries and ‘antagonistic struggle’ between contradictories). Equally significant is the fact that they delineate the conditions for the demise of social forms in terms of SAC, which brings this Introduction round full circle to where it started.

The first condition is agential: ‘death or survival depends on the interaction of socially-situated actors holding different concerns and vested interests’ (p. 237). Vested interests represent ‘prizes’ yielding benefits in different currencies: economic capital, prestige, relational goods and moral satisfaction, whilst ‘concerns’ are the reasons for those contesting or defending their distribution at any given time. The root form of successful contestation consists in one group of agents valuing or devaluing the prizes, as in the increasing differentials in earnings where the rising rates of pay for top corporate executives and bankers is an upward re-valuation in developed countries, only recently starting to be challenged. Simultaneously, the political instigation of bureaucratic barriers to receipt of previously unproblematic welfare benefits (e.g. for the disabled and unemployed) not only signal reduced incomes but also appears to herald the end of the welfare state.

The second condition is structural and entails the dismantling of institutions upon which the receipt of prizes previously depended and need involve no full frontal attack. For example, the sedulous insertion of ‘media celebrities’ (through, for example, the Honours system in Britain) is not unrelated to the devalued prestige of top academics, given that a media presence increasingly defines who top Professors are, whilst less educated media stars are becoming nominated as University Chancellors!

The third condition is cultural and involves ‘reinscribing the social form in a different discourse’. Part of the loss of intergenerational solidarity as expressed towards pensioners in Europe, now resented for their disproportionate use of health care resources as they live longer and are proportionately more numerous (given falling birth rates), is registered as a semantic distinction between the ‘vulnerable elderly’ and the rest. The vacuous term ‘vulnerability’ is a social shifter, serving here

to distance being pensionable from objective factors such as age, years of service or seniority and could presage the death of the pension as a universal right.

In sum, the two authors appear correct that morphogenesis and morphostasis have to be theorized together if we are to talk about a coming Morphogenic Society convincingly. This will be all the more coherent if we can theorise about them in the same terms as they do.

1.5 Conclusion

Let us recall the objective of this book series. The aim is to answer the transcendental question: ‘What needs to be the case to make a Morphogenic society – as a wholly new, global social formation – possible?’ One response we have rejected in the three volumes published to date is the mere presence of plentiful morphogenetic change representing more variety and (in principle) more opportunity. There are three main reasons for refusing this formula:

- variety and opportunity can be concentrated in very few hands, leaving most hands empty on a new but steeper gradient of inequality, which is fundamentally unstable.
- at least as many variants of Morphogenic societies are conceivable as there are multiple forms of late modernity.
- many of these variants would fare very badly if assessed as providing the conditions for a good life for all. However, such outcomes are not inevitable and neither are we ethically neutral about them.

What should we reply to critics who, in the light of the above, might recommend abandoning the whole notion of Morphogenic society? Quite simply that we have two good reasons for continuing with it. Firstly, because right now the developed world is experiencing the conjuncture between *low system integration* (as the recent Crisis makes undeniable) and *low social integration* (augmented by the austerity measures taken), which is propitious to radical social change and could be a turning point. Secondly, and more compellingly, because the exponential generation of new ‘contingent complementarities’ strongly implies that our one global society is, indeed, going to assume one Morphogenic form or another, if increasingly intense change is the main criterion. If this is the case, then it follows that as theorists who do not endorse value-neutrality but who care about eudemonia, we have to reformulate the transcendental question posed above, asking instead: ‘What needs to be the case to make a eudemonic Morphogenic society possible?’

As a group, we have learned a great deal through writing and discussing our diverse contributions together, and the main lesson seems to be the ineluctable necessity of articulating and building upon our normative commitment by defining the lineaments of a Concrete Morphogenic Utopia. To Bhaskar (1993: 395) ‘Concrete utopianism consists in the exercise of constructing models of alternative

ways of living on the basis of some assumed set of resources, counterbalancing actualism and reinforcing hope'.²² That entails using our sociological imaginations to:

- (i) define the good society in relation to an expected and continuing increase in the variety of resources;
- (ii) in a manner that allows this variety to translate into a distribution of opportunities that furnishes the social conditions for a good life to all members of society;
- (iii) and proves resistant to the endurance or recrudescence of the current actualist state of affairs.

The aim is to avoid any facile expression of optimism or idealism but, rather, to venture a normative 'yardstick' for evaluating what forms of internal relational organization would bring any new but specific social formation, characterized by intensive morphogenesis, closer to or further away from it.

This is unfinished business, but our work in progress shows that collectively we have begun sketching partial and tentative answers to these requirements in our three Volumes to date. Preliminary responses to what would make for (i) a good morphogenic society, pivot upon a relational organization generating 'unity-in-diversity' or – which amounts to much the same – producing the 'integration of diversity'. One important signpost to (ii) entails the gradual agential orientation to protecting and amplifying the emergent and irreducible relational goods agents themselves generate – and the reverse for relational evils²³ – as the product of relational reflexivity. The pointer to (iii) consists in the Commons or the Common Good, as the antithesis of the Utilitarian 'greatest good of the greatest number' or the political philosophy of the 'general good' – both of the latter, unlike the former, increasing the higher the proportion of the marginalized who are excluded from consideration. The Common Good is the only formula that supplies everyone – non-coercively and without mystification – with good reason to defend it.

These are unashamedly normative *desiderata*. That is why our next volume will be devoted to normativity and its own morphogenesis, morphostasis and the necessary morphonecrosis. They are also obedient to the SAC requirement, which places them outside the Platonic cave and mythic faith in the power of utopian ideas. What they do not and cannot tell us is *how to get there* and that is why our fifth volume must try to present the morphogenetic road leading to Eudemonia.

References

- Archer, M. S. (1988). *Culture and agency: The place of culture in social theory*. Cambridge: Cambridge University Press.
- Archer, M. S. (1995). *Realist social theory: The morphogenetic approach*. Cambridge: Cambridge University Press.

²²Note that the title of Ernst Bloch's seminal work (1959), *The Principle of Hope*, stresses the last feature.

²³As opposed to the 'transactionalism' of Emirbayer's (1997) 'relationist' sociology, which remains tied to the negotiated exchange of equivalents, but is therefore still contestatory, and remains purely aggregative.

- Archer, M. S. (2003). *Structure, culture and the internal conversation*. Cambridge: Cambridge University Press.
- Archer, M. S. (2007). *Making our way through the world: Human reflexivity and social mobility*. Cambridge: Cambridge University Press.
- Archer, M. S. (2011). Routine, reflexivity and realism. *Sociological Theory*, 28(3), 272–303.
- Archer, M. S. (2012). *The reflexive imperative in late modernity*. Cambridge: Cambridge University Press.
- Archer, M. S. (Ed.). (2013). *Social morphogenesis*. Dordrecht: Springer.
- Archer, M. S. (Ed.). (2014). *Late modernity: Trajectories towards morphogenic society*. Dordrecht: Springer.
- Archer, M. S., & Elder-Vass, D. (2011). Cultural system or norm circles?: An exchange. *European Journal of Social Theory*, 15, 93–115.
- Bhaskar, R. (1975). *A realist theory of science*. Leeds: Leeds Books.
- Bhaskar, R. (1979). *The possibility of naturalism*. Brighton: Harvester.
- Bhaskar, R. (1993). *Dialectic: The pulse of freedom*. London: Verso.
- Bhaskar, R. (2008 [1979]). *The possibility of naturalism*. Abingdon: Routledge.
- Bloch, E. (1959/1986). *The principle of hope* (3 vols). Oxford: Blackwell.
- Buckley, W. (1967). *Sociology and modern systems theory*. Englewood Cliffs: Prentice-Hall.
- Bunge, M. (2004a). How does it work: The search for explanatory mechanisms? *Philosophy of the Social Sciences*, 34(2), 182–210.
- Bunge, M. (2004b). Clarifying some misunderstandings about social systems and their mechanisms. *Philosophy of Social Sciences*, 34(3), 371–381.
- Burger, T. (1998). Review of the creativity of action. *Contemporary Sociology*, 27, 1.
- Castells, M. (2012). *Networks of outrage and hope*. Cambridge: Polity.
- Colapietro, V. M. (1989). *Peirce's approach to the self: A semiotic perspective on human subjectivity*. Albany: State University of New York Press.
- Collier, A. (1994). *Critical realism: An introduction to Roy Bhaskar's philosophy*. London: Verso.
- Davis, W. H. (1972). *Peirce's epistemology*. The Hague: Martinus Nijhoff.
- Donald, M. (1991). *Origins of the modern mind: Three states in the evolution of culture and cognition*. Cambridge, MA: Harvard University Press.
- Elder-Vass, D. (2010). *The causal power of social structures*. Cambridge: Cambridge University Press.
- Emirbayer, M. (1997). Manifesto for a relational sociology. *American Journal for Sociology*, 99(6), 1411–1454.
- Gorski, M. (2009). Social “mechanisms” and comparative-historical sociology: A critical realist proposal. In P. Hedström & B. Wittrock (Eds.), *Frontiers of sociology*. Leiden: Brill.
- Gross, N. (1999). Review of the creativity of action. *Theory and Society*, 28, 335–342.
- Gross, N. (2009). A pragmatist theory of social mechanisms. *American Sociological Review*, 74, 358–379.
- Hedström, P., & Swedberg, R. (1998a). *'Introduction' to social mechanisms: An analytical approach to social theory*. Cambridge: Cambridge University Press.
- Hedström, P., & Swedberg, R. (Eds.). (1998b). *Social mechanisms: An analytical approach to social theory*. Cambridge: Cambridge University Press.
- Joas, H. (1996 [1992]). *The creativity of action*. Chicago: University of Chicago Press.
- Kilpinen, E. (1998). Creativity is coming. *Acta Sociologica*, 41(2), 173–179.
- Lawson, T. (1997). *Economics and reality*. London: Routledge.
- Lockwood, D. (1964). Social integration and system integration. In G. K. Zollschan & W. Hirsch (Eds.), *Explorations in social change*. Boston: Houghton Mifflin.
- Lukes, S. (1979). Some problems about rationality. In B. R. Wilson (Ed.), *Rationality*. Oxford: Basil Blackwell.
- Mahoney, J. (2001). Review: Beyond correlational analysis: Recent innovations in theory and method. *Sociological Forum*, 16, 575–593.
- McLellan, D. (1977). *Karl Marx: Selected writings*. Oxford: Oxford University Press.

- Mouzelis, N. (1998). Beyond the normative and the utilitarian. *British Journal of Sociology*, 49(3), 491–497.
- Peirce, C. S. (1958 [1935]). *Collected papers of Charles Sanders Peirce* (Vol 6, C. Hartshorne & P. Weiss, Eds.) Cambridge, MA: Harvard University Press.
- Porpora, D. V. (1989). Four concepts of social structure. *Journal for the Theory of Social Behaviour*, 19, 195–212.
- Porpora, D. V. (forthcoming 2015). *Reconstructing Sociology: The Critical Realist Approach*. Cambridge: Cambridge University Press.
- Reiss, J. (2007). Do we need mechanisms in the social sciences. *Philosophy of the Social Sciences*, 37, 163–184.
- Rosa, H. (2003). Social acceleration: Ethical and political consequences of a desynchronised high-speed society. *Constellations*, 10(1), 3–33.
- Rosa, H., & Scheuerman, W. E. (Eds.). (2009). *Highspeed society: Social acceleration, power and modernity*. University Park: Pennsylvania State University Press.
- Sayer, A. (1992). *Method in social science*. London: Routledge.
- Searle, J. R. (1995). *The construction of social reality*. London: Penguin, G.B.
- Steel, D. (2004). Social mechanisms and causal influences. *Philosophy of Social Sciences*, 34(1), 55–78.
- Tilly, C. (1995). *Popular contention in Great Britain, 1758–1834*. Cambridge, MA: Harvard University Press.
- Wight, C. (2004). Theorizing the mechanisms of conceptual and semiotic space. *Philosophy of the Social Sciences*, 34, 283–299.

Part I
Conceptualising Mechanisms

Chapter 2

Causal Mechanisms: Lessons from the Life Sciences

Philip S. Gorski

The appeal to “causal mechanisms” has been a rallying cry for Critical Realism (CR) ever since its (re)emergence in the UK during the 1970s (Bhaskar 1975, 1979; Harré 1970; Harré and Madden 1975).¹ Causal mechanisms have likewise become a conceptual mainstay of the Morphogenetic/Morphostatic (MM) approach since its inception in the late 1970s (Archer 1979, 1985, 1995).

Over the last decade and a half, other voices have joined in as well, and the rallying cry has rapidly built into something of a chorus (Gerring 2008; Hedström and Ylikoski 2010; Mahoney 2001). In American social science, at least, mechanisms have now gone mainstream. Mechanisms talk pervades not only sociology but political science and economics as well.

The attraction of the mechanistic approach is clear enough. There is a widespread recognition that the search for social laws, even probabilistic ones, has proven futile. There is also a general if not universal sentiment that cultural interpretation does not exhaust social science; some form of causal explanation must also be a goal. In the present constellation, then, many social scientists are attracted to mechanistic explanation as a possible *via media* between nomothetic hubris and idiographic humility.

How should Critical Realists and Morphogenetic theorists respond to the sudden popularity of mechanisms talk? With some ambivalence, I will argue. On the one hand, they should welcome it, insofar as the turn towards mechanisms does involve a turn away from logical positivism. On the other hand, they should remain wary, because the mechanistic turn has not been as sharp or as final as it seems; many neo-mechanists are still half-positivist.

The remainder of the essay is in four parts. In Part I, I review the four most influential approaches to causal mechanisms within contemporary American

¹I say “re-emergence”, because the term first appears in English in: Sellars, Roy Wood (1916).

P.S. Gorski (✉)

Department of Sociology, Yale University, New Haven, CT 06520-8265, USA

e-mail: philip.gorski@yale.edu

sociology: mainstream, analytical, counterfactual and neo-pragmatist. I argue that they are not particularly critical nor even fully realist. In Part II, I subject the mechanisms concept to a critical-historical analysis. I argue that the mechanisms metaphor still carries a good deal of ontological baggage from the mechanistic worldview of the seventeenth century. It must therefore be used with a great deal of caution. In Part III, I survey the recent discussion of causal mechanisms within the philosophy of biology. I highlight a number of commonalities between biological and social mechanisms, but caution against easy analogies. In the conclusion, I argue in favor of a thicker and more pluralistic understanding of causation, not only for the social sciences, but also for the “special sciences” more generally.

2.1 Causal Mechanisms in American Sociology: Four Approaches

There is a folk version of mechanisms talk that one encounters quite often in American sociology and political science these days. I will call it the generic approach (GA). In the GA, causal mechanisms are a supplement to the positivist approach. “Cause” and “effect” are still defined in Humean or positivist terms, i.e., as “events” or “variables.” “Causal mechanisms” are then construed as the “causal chain” that connects them. The causal links are likewise conceptualized as “variables” or “events” and frequently characterized as “mediating” or “intervening.” Even a casual inspection of recent articles in the leading journals in the United States will quickly turn up many examples of this “association plus theory” version of causal mechanisms.

The historical origins of the GA are somewhat unclear. Knight, Morgan and Winship trace them back to Paul Lazarsfeld’s notion of “M-accounts” (Knight and Winship 2013; Morgan and Winship 2007). Such accounts introduce a third variable that might cast further light on the causal connections that underlie a statistical association and help disambiguate the direction of causal influence (Kendall and Lazarsfeld 1950; Lazarsfeld 1955). For example, if one discovered a correlation between being male and having car accidents, one might introduce an additional variable such as “miles driven” and see what effect this had on the association (Hagenaar 2004).

A decade later, Hubert Blalock (1967), Otis Dudley Duncan (1966) and others drew on the pioneering work of biologist Sewall Wright (1921) in order to incorporate intervening variables into multiple regression analysis via path analytic techniques (Sewell et al. 1969, 1970). In this way, it was argued, one could indeed get from correlation to causation (Blalock 1968; Land 1969).

While another famous member of the Columbia Sociology Department did explicitly invoke the mechanisms idea (Merton 1949), Lazarsfeld himself did not, nor did later advocates of path analysis, with one important exception: Raymond Boudon. Harkening back to Merton, Boudon would argue that the only way to get

from statistical association to causal inference was via “generative mechanisms” derived from social theory (Boudon 1974, 1976, 1991). By “theory”, of course, Boudon meant rational choice theory.

But Boudon’s proto-GA approach was vehemently rejected by leading members of the Wisconsin School such as Robert Hauser, who insisted that a causal explanation just was a statistical model, nothing more, nothing less (Hauser 1976). Hauser’s view prevailed, at least within mainstream sociology, and in the decades that followed, most sociologists stopped talking about causal mechanisms. Why? One likely reason is that rapid advances in computing power and statistical software made it so easy to do “kitchen sink” regression analyses (i.e., to throw in every variable “including the kitchen sink”). Be that as it may, this much is certain: the GA approach to causal mechanisms long antedates the current-day revival of mechanistic thinking – indeed, it entirely antedates widespread use of the mechanisms concept.

Apart from a few neo-Marxists familiar with CR (Brooks 1989; Isaac 1987a, b; Wright 1987, 1997) there was relatively little explicit talk about causal mechanisms within American sociology between the mid-1970s and the mid-1990s.² This changed abruptly around the turn of the millennium, due mainly to the efforts of an interdisciplinary group of predominantly Scandinavian social scientists centered around Peter Hedström. Placing themselves in the lineage of Lazarsfeld and Merton, they sought to revive the agenda first set forth by Boudon two decades before, namely, a loose-jointed version of rational choice theory in which individual actors were the basic building blocks of all causal mechanisms, the “cogs and wheels” inside of the “black box” connecting causal variables (Elster 1983, 1989, 1999; Hedström and Swedberg 1996, 1998; Sørensen 1998). Perhaps because of the deep resistance to rational choice within American sociology, the Hedström group later restyled their approach as “Analytical Sociology” (Demeulenaere 2011; Hedström 2005, 2008; Hedström and Bearman 2009a; Hedström and Ylikoski 2010).

Unlike Boudon, Hedström and many of his followers do not envision causal mechanisms as a mere add-on for statistical analysis (i.e., as a way of giving greater “depth” to regression modeling). On the contrary, they have become increasingly opposed to variables-oriented sociology as such. Instead, following James Coleman (1994), they see it as a way of putting sociological analysis on firmer ontological foundations – namely, methodologically individualistic ones. All social phenomena, they insist, can ultimately be reduced to “micro-level” interactions between individuals, with their “desires, beliefs, and opportunities.” They do include “macro-level phenomena” in their basic model, but only as perceived “constraints” on individual action. They explicitly reject strong, ontological versions of social-structural emergence in favor of weak, epistemic understandings of property emergence. In other words, they regard social structures as real only if and insofar as social actors behave as if they are real. Accordingly, they distinguish between three basic categories of social mechanisms: (1) “macro-micro” or “situational”; (2) “micro-micro” or “individual action” and (3) “micro-macro” or “transformational” (Hedström and Swedberg 1996: 297). While the AS approach appears similar to the

²For one important exception, see: Stinchcombe, Arthur L. (1991).

MM approach at a schematic level, the resemblance is only superficial, not only because social structures are treated as weakly emergent but also because human persons are treated as “rational actors.”

The third approach to causal mechanisms currently on offer within American sociology is “counterfactual dependency” (CFDp). Its chief advocates have been Christopher Winship and his students (Elwert and Winship 2010; Elwert 2013; Morgan 2001, 2013; Morgan and Winship 2007). The principal architects of CFDp have been James Woodward (2002, 2003, 2004, 2011), on the philosophical side, and Judea Pearl, on the statistical side (Pearl 2009, 2010), though other philosophers and statisticians have lately begun contributing to this literature as well (Bollen and Pearl 2013; Hitchcock 2001; Hoerl et al. 2011; Spirtes et al. 1993).

David Hume is sometimes presented as the founder of this approach (Menzies 2009). In a key passage of the *Essay Concerning Human Understanding*, Hume offered the following definition of causation: “We may define a cause to be an object followed by another, and where all the objects, similar to the first, are followed by objects similar to the second. Or, in other words, *where, if the first object had not been, the second never had existed.*” Hume’s second locution may be read as implying a relation of counterfactual dependency. Other scholars (Hausman 1981; Sekhon 2004), including Pearl (2009) himself, trace the origins of CFDp to John Stuart Mill’s “method of difference” (Mill 1986). That method, to recall, involves comparing two similar cases that yield different outcomes to find the one major difference that distinguishes them; this will be the key cause.

But the revival of counterfactual reasoning within contemporary philosophy is mainly due to the influence of David Lewis. In his early writings on counterfactuals, Lewis defined causation as follows: “Where *c* and *e* are two distinct possible events, *e* causally depends on *c* if and only if, if *c* were to occur *e* would occur; and if *c* were not to occur *e* would not occur” (Lewis 1973a, b). Following Hume, then, Lewis understands cause and effect as “events.” He further stipulates that these events must be “independent” of one another. Critics immediately discovered a number of problems with Lewis’ approach. What if *c* and *e* are both caused by *b* (spuriousness)? What if *c* is caused by *b* (transitivity)? What if *e* can be caused by *b* and/or *c* (overdetermination)? What if *c* is prevented by *b* (preemption)? How can one be certain that *c* caused *e*, rather than the other way around (temporal asymmetry)? How can one be certain that *c* could not have occurred (possible worlds)?

In his later writings, Lewis attempted to deal with these problems by redefining counterfactual dependency in terms of continuous variation rather than discrete events, such that if, how, when *c* occurs will affect if, how and when *e* occurs (Lewis 2000). Conceived in this way, counterfactual semantics were easily combined with statistical analysis of “potential outcomes” (the so-called Neyman-Holland-Rubin model). CFDp was born.

The potential outcomes approach was originally developed by horticulturalists and epidemiologists, who were interested in the average effects of specific interventions on a particular population (e.g., the use of a new fertilizer or drug). In other words, the goals were practical rather than scientific. But what if the analyst was interested in typical causes rather than average effects? Judea Pearl has argued that one can get from observed effects to underlying causes by combining counterfactual

reasoning with three further elements: causal models, causal graphs and structural equations. By “causal models”, he understands pictorial representations of a causal system. His stock examples are human-made physical set-ups, such as electrical circuits. By causal graphs, he understands “directed acyclic graphs” (DAGs) which represent causal processes via arrow diagrams, with each arrow standing in for a causal variable. Structural equation models are then used to test for the presence, strength and direction of the causal effects. It is very important to note that Pearl’s approach requires a number of highly restrictive assumptions that are not often realized in the social world. Otherwise, the statistical tests will not be sufficient to establish the direction and magnitude of the effects, nor can the DAG be assumed to be an accurate model of the actual causal process.

The fourth and final approach to causal mechanisms that I wish to touch on is the neo-pragmatist one (NP) recently sketched out in a well-received article by Neil Gross (2009). There, Gross proposes that we define “social mechanisms” as “composed of chains or aggregations of actors confronting problem situations and mobilizing more or less habitual responses” (2009: 368). This leads to a research agenda which “entails breaking complex social phenomena into their component parts to see how aggregations or chains of actors employing habits to resolve problem situations to bring about systematic effects” (2009: 375). As Gross himself notes, the NP approach is fairly similar to AS, insofar as it tries to explain higher-order social properties in terms of lower-order individual-level processes. It also resembles AS in another respect, which Gross does not highlight: namely, in its rejection of strong social emergence. There are at least two important differences between NP and AS. One is that the NP rejects the utilitarian rational-actor model in favor of a practical, habitual-actor model. Another is that it invokes micro-macro explanations to explain stability (morphostasis), rather than transformation (morphogenesis), as in AS. The implication, never made explicit by Gross, is that system-level change – morphogenesis – is the result of “creative action” (Joas 1996) that responds to “problem situations” that challenge habitual routines. While the NP approach is much less developed at present than either AS or CFDp, both philosophically and methodologically, neo-pragmatism qua social theory is certainly very much *en vogue* amongst younger, theoretically minded American sociologists today.

For the Critical Realist, however, none of these approaches can be considered fully realist, if by “fully realist” we mean epistemologically, ontologically and ethically realist. For example, the AS approach is epistemologically realist but not ontologically realist. It squarely rejects empiricist and positivist understandings of causation as a constant conjunction or probabilistic association between events or variables. And it firmly embraces a realist view of causation in terms of mechanisms. However, it is ontologically ir-realist to the extent that it allows only an epistemic form of social emergence understood as higher-order properties that are perceived by social actors. As I have shown elsewhere (Gorski 2009), this renders AS – and all such efforts to combine social realism with methodological individualism – ontologically incoherent. How so? On the one hand, AS admits the existence of non-observable sub-individual level entities and process (e.g., conflicting desires and rational choices) while denying the existence of supra-individual entities and processes on the grounds that they are not observable. In this regard, AS is still empiricist and not fully realist.

With CFDp, we encounter the reverse situation: it is ontologically realist but epistemologically antirealist. It is ontologically realist to the degree that it at least tacitly allows for “downward” or “macro-micro” forms of causation. For example, CFDp analyses of social mobility often look at the impact that a “macro” variable such as education or neighborhood has on a “micro” variable such as life chances or average income (Morgan 2001; Sharkey and Elwert 2011). Still CFDp remains epistemologically irrealist insofar as it conceptualizes causation as a probabilistic relationship between variables, rather than as a processual relationship between active entities. And this generates epistemological confusion within CFDp. For instance, empirical analyses within the CFDp framework frequently confuse mechanisms with models. Specifically, they present DAGs as causal mechanisms rather than as statistical models of those mechanisms.

Gross’ NP approach might be described as “Hume lite.” It is doubly irrealist but not strongly so. The epistemological irrealism manifests itself in the unspoken equation of mechanisms with regularities. Consequently, it cannot allow for suppressed, inactive or intermittent mechanisms. In other words, neo-pragmatism is another form of actualism. The ontological irrealism reveals itself in an easygoing form of methodological individualism, which is skeptical about the existence of supra-individual social structures. It leads to two programmatic difficulties. One is that social transformation cannot be explained in terms of causal mechanisms; it can only be accounted for in terms of “creative action” (Joas 1996). Of course, creative action can be a mechanism of social transformation (Sewell 1996). But it is hardly the only one. The other shortcoming is that it must explain morphostasis purely in terms of habitual action, because it lacks, or rather eschews, any notion of social structures that might generate or reproduce habits.

What is more, none of the four approaches is morally realist. They see causal mechanisms as an integral feature of a good explanation; but they do not attribute any critical function to them. Both CR and MM see the proper identification of causal mechanisms as the *sine qua non* of a good explanation. But they also believe that mechanistic analysis can function as a form of social critique, and in at least two different ways. The first is what Bhaskar has called “explanatory critique” (Bhaskar 1986, 2002). This involves the identification of social mechanisms whose operation is systematically misrecognized by, and therefore concealed from, the social actors themselves, where such misrecognition is crucial to the continued operation of the mechanism. This form of critique is hardly specific to CR of course. After all, the paradigmatic example of an explanatory critique is Marx’s analysis of the extraction of surplus value (Marx et al. 1976). Of course, social actors do not always have a “false consciousness” about the social structures they are enmeshed in; sometimes, they understand them quite well and enter into them more or less voluntarily, *faute de mieux*. I therefore propose that we distinguish a second form of mechanistic analysis. Let us call it “eudemonistic critique.” It involves showing that a particular form of life-conduct or social organization limits or prevents the realization of certain human capacities or relational goods – and that it does so unnecessarily.

2.2 Causal Mechanisms and the Physicalist Imaginary: A Critical-Historical Analysis

For the Critical Realist, the recent move towards mechanistic analysis in American sociology marks a welcome departure from the sort of positivist empiricism that so dominated the discipline for over half a century. However, as we have just seen, the realist train has not quite made it out of the Humean station; it remains half-stuck in various forms of skeptical irrealism – epistemological, ontological or moral. Why? There are many reasons, of course, including commitments to: certain positivist-inspired methodological techniques; a deeply individualistic ethico-political framework; and a sharp distinction between “facts” and “values.”³ In this section, I would like to argue that there is also another deeper and less obvious reason: contemporary approaches to social mechanisms are tacitly structured by a *physicalist imaginary* whose roots lie in the “mechanical philosophy” of the seventeenth century. In concluding, I will contend that CR itself has not entirely disentangled itself from this imaginary.

I borrow the notion of an “imaginary” from Charles Taylor. In *A Secular Age*, for example, Taylor defines a “social imaginary” as “the way that we collectively imagine, even pre-theoretically, our social life” (Taylor 2007: 146). Elsewhere, he defines it more colloquially as: “the ways people imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations that are normally met, and the deeper normative notions and images that underlie these expectations” (Taylor 2002: 23).

Following Taylor we might also speak of a “natural imaginary.” By “natural imaginary”, I mean something like “the way that we collectively imagine, even pre-theoretically, the natural world.” Or, more expansively, “how we collectively and often pretheoretically envision the ontological furniture of the natural world, how it is ordered, and where human beings fit into these arrangements.”

Taylor argues that social imaginaries are historically and culturally variable. I would argue that this applies to natural imaginaries as well. The physicalist imaginary, for example, is an early modern revival of the ancient atomism of Democritus and Lucretius, supplemented by the geometrical formalism of Pythagoras and Plato (Funkenstein 1986; Gaukroger 2006; Shapin et al. 1985; Wilson 2008). Put simply, it presumes that the world is “really” composed of elementary particles that interact in a deterministic manner that can be captured mathematically, and that everything else in the world is ultimately epiphenomenal. I refer to this as the “physicalist imaginary” because the resurgence of atomistic metaphysics in the seventeenth Century was largely a philosophical response to the triumph of celestial mechanics, which combined atomism and Pythagoreanism. I say “philosophical”, because its chief proponents were men like Descartes and Hobbes, who may have fancied themselves physicists, but who are now known to us mainly as philosophers, not least because their physical theories were catastrophic failures, whereas those whom

³For a critique of the latter, see: Gorski, Philip S. (2013). and the literature cited therein.

we nowadays remember as physicists did not firmly embrace this atomistic metaphysics, either because they thought scientific knowledge was founded on experimentation (e.g., Galileo and Boyle) and/or because they were ultimately committed to a non-mechanistic metaphysics of some sort (e.g., Newton, who believed that divine intervention was necessary to maintain cosmic order).

Though they are mostly implicit in modern-day social theory, the basic metaphysical assumptions of the physicalist imaginary are made very explicit in the atomistic physics of early modern mechanism. Four of the key assumptions are as follows: (1) all things really consist of atoms; (2) all change is just the motion and collision of atoms; (3) all such motions and collisions obey the laws of geometry; (4) therefore, all events are fully determined in advance.

While many early modern scientists came to believe that this was an accurate description of the physical world, Hobbes and other neo-Epicurean philosophers argued that the social world could also be understood in exactly the same way (Martinich 2005). It, too, was comprised of “atoms” (i.e., individuals). Individual behavior was driven by internal “motions” (i.e., desires for objects). Human interaction was subject to “natural law” (in the Grotian sense of “self-preservation”). Therefore, social life was also fully deterministic.

The central ambition of the neo-Epicureans was to do to the Aristotelian view of human society what mechanistic physics had done to the Aristotelian cosmos, namely to supplant it. In this way, they hoped to unify the sciences by placing them on the same metaphysical foundation: atomism. In so doing, they transformed a natural imaginary into a social one, giving birth to the physicalist worldview that still underpins much work in sociology and in the social sciences more broadly.

The physicalist imaginary is deeply embedded in the modern social imaginary, so deeply in fact that it is worth recalling the preceding natural imaginary it replaced, namely, the Aristotelian world picture that underwrote medieval natural philosophy (Feser 2004; Sachs 2004). Let me quickly draw out four important points of contrast. (1) Hylemorphic ontology: in Aristotelian metaphysics, the world was comprised, not of atoms, but of “substances”, complex combinations of matter and form, which were hierarchically ordered. The physicalist imaginary was derived from a flat and monistic ontology in which there was only one substance. (2) Causal Pluralism. In Aristotelian natural philosophy, an adequate explanation invoked four different types of causation: material, efficient, formal and final. Early modern mechanism reduced the four types of causation to one: efficient. (3) Powerful Particulars. Different substances behave in characteristic ways. There are no “laws of motion” that apply equally to all realms of being (physical, biological, social and so on). In the physicalist imaginary by contrast particular powers are lumped together into the unifying category of “cause.” (4) Human Freedom. One of the characteristics powers of human persons is to act according to reason; another is to live in society. In the physicalist imaginary, by contrast, human beings are just so many billiard balls, jostling into one another.

Whereas the early modern mechanists projected a physicalist ontology onto the human world, Aristotelianism did more or less the reverse: it understood the cosmos as a living entity, suffused with agency and purpose (Lear 1988). In sum, the shift

from the Aristotelian cosmos to the mechanical world-picture involved stripping away: (1) the ontological category of form and therefore also of substance; (2) material, formal and final aspects of causation; all causation was reconceived as efficient causation; (3) the shift from a purposive to a deterministic view of the natural order. (4) the shift from a biocentric to a physiocentric cosmos.

The continuing influence of the physicalist imaginary on the social sciences can be seen in various ways. One is the enduring power of certain metaphysical prejudices. Two are particularly consequential: ontological smallism and causal deflation. By “ontological smallism” (Wilson 2004: 22–24), I mean the pervasive tendency within scientific discourse to privilege the small over the large in all realms of study. The unspoken assumption is that things at larger scales can only be explained in terms of things at a smaller scale and never the reverse. The classic expressions of smallism in the social sciences are some form of “methodological individualism” and its Siamese twin, methodological reductionism.⁴ By “causal deflation”, I mean the tendency to squeeze all forms of causation into the model of efficient causation and, even more, to (re)conceive of efficient causation in a purely mechanistic fashion (i.e., as a direct transfer of energy from one entity to another via physical contact). One common manifestation of deflation is the widespread practice of representing all causation in terms of nodes and arrows. Social science smallism creates an epistemological privilege for reductionism in all disciplines that in turn justifies a disciplinary hierarchy in which intellectual status is directly correlated with smallist commitments. The smaller the primary objects of study in your discipline or sub-field, the more scientific your research is, and the higher your status. Causal deflation, meanwhile, compels social scientists to translate all manner of causal relations into an efficientist language, renders any form of causation not involving physical contact (e.g., collective memory) inherently “spooky” and “unscientific”, and blinds researchers to the diversity and specificity of causal relations in the social world.

CR cannot be charged with smallism. It has been committed to strong emergence and ontological stratification since its inception. However, it has not entirely freed itself of the smallest prejudice. For example, the recurring trope of “underlying mechanisms” carries the unfortunate connotation that mechanisms operate at the micro-scale. There is, as well, a small remnant of causal deflation. The MM approach does draw a clear distinction between “macro” and “micro” causation, to be sure. But macro-to-micro causation is often represented in terms of efficient causation: structure at T_1 impacts agency at T_2 . No doubt! But not only. Structure also influences agency *synchronically* by constraining and enabling certain agentic powers. What is needed, then, is: (1) an understanding of social mechanisms that is fully shorn of the mechanistic metaphysics of the physicalist imaginary; and (2) an understanding of social causation that is more attentive to: (a) different *forms* of social causation; and (b) specific types of causal *powers* in the social world. Recent work in the philosophy of biology can help move CR and MM towards all of these goals.

⁴Though in recent years, the relationship has become uncomfortable, as individualism has been challenged by even more radical forms of reductionism (e.g., neuronal or genetic).

2.3 Causal Mechanisms in the Life Sciences: The Chicago School Approach

While most Critical Realists will happily agree that the physicalist imaginary is ontologically inadequate, few analytic metaphysicians would join them. Amongst philosophers, particularly philosophers of mind, ontological smallism and causal deflation are still very much the order of the day. In the philosophy of science, however, and especially in the philosophy of biology, other views have been gaining ground, heterodox views that are more consonant with CR and MM. Since much of this work has been done by William Wimsatt and his students at the University of Chicago, I will refer to this approach as “the Chicago School” – not to be confused with the Chicago School in Economics, of course, which is mechanism par excellence! The Chicago School provides very powerful arguments against the physicalist imaginary and a useful starting point for reconstructing our social imaginary along Critical Realist lines.

The area of philosophy where the validity of smallism and deflation have been most heavily debated is probably the philosophy of mind. The central question in this literature concerns the relationship between mind and brain. And the most popular answer is probably Jaegwon Kim’s notion of “supervenience” (Kim 1979, 1987, 1993, 2002). While some of the early twentieth century emergentists used “supervenience” as a synonym for emergence (Broad 1929), present-day philosophers of mind typically present it as an alternative to emergence. Let us assume, as CR does, a “stratified” or “layer-cake” ontology. For simplicity’s sake, let us further assume two strata or layers, “A” and “B”, where “A” is higher and “B” is lower. “The core idea of supervenience is captured by the slogan that there cannot be an *A*-difference without a *B*-difference” (McLaughlin 1995, 2005, 2006). For example, let us imagine that mental states (level A) “supervene” on brain states (level B). This means that any change in mental state (feelings of pain or hunger, thoughts of exercise or dinner, and so on) will correspond to a change in brain state. The attraction of this approach for philosophers of mind is that it saves the qualia – the “secondary qualities” of subjective experience (e.g., sweetness, redness, perhaps even beauty) (Searle 1998, 2004) – but without abandoning physicalism. This is because supervenience allows for a “weak” or “epistemic” form of emergence. It allows for emergent properties (e.g., qualia) that can be exhaustively explained in terms of lower-order physical entities and processes (e.g., the firing of neurons). Some sociologists have also been attracted to supervenience for similar reasons: it allows one to defend “methodological individualism” without denying the existence of macro-social properties (Healy 1998; Hedström and Bearman 2009b; Sawyer 2002, 2005). On this account, there may be “social facts” (e.g., birth rates, crime rates and so on), but they will “supervene” on individual activity. In other words, higher order processes and properties are nothing but aggregations of lower order ones.

The problem with supervenience, as Kim himself has recently concluded, is that it does not in fact provide the sort of stable middle ground between Cartesian dualism and reductive physicalism that it promises (Kim 1999, 2005, 2011). To see why,

consider the mind/brain relationship again. If we accept that all mental states supervene on brain states in Kim's sense, then why bother studying mental states at all? Why not just focus on the brain? After all, the supervenience account strongly implies that the "real" causal action will be at the level of the brain, anyway; mental states are ultimately just epiphenomenal. To suggest otherwise, Kim argues, entails the possibility that mental states might have causal powers independent of brain states, opening the door to "downward causation" (Andersen 2000; Campbell 1974; Murphy et al. 2009). By "downward causation", Kim understands a form of efficient causation in which A properties cause B properties. For example, one's mental state at T_1 would exert "downward causation" on one's brain state at T_2 (Kim 2000). And this, says Kim with rather considerable alarm, would seem to threaten the "physical closure" of the world, because it implies that mental processes might sometimes overrule or even violate physical laws. With the dissolution of supervenience Kim concludes, there are really only two stable positions left in the philosophy of mind: reductive physicalism and metaphysical dualism. And only one of these is scientifically legitimate, namely, physicalism. Is he right?

The recent work of the Chicago School suggests not. In a series of articles, William Wimsatt paves the way by turning the tables on reductive physicalists. He asks: What would it really mean for a higher order system property to really just be nothing but an aggregation of lower order processes? (Wimsatt 1985, 1997). Wimsatt enumerates four conditions which must all be fulfilled: (1) Inter-Substitution: internal rearrangements or external substitutions of system parts will not affect system properties; (2) Qualitative Similarity: Increases in the size or scale of the system have no influence on its system properties; (3) De/Recomposition. The system can be disassembled and reassembled without any loss of system properties. (4) Linearity: "There are no cooperative or inhibitory interactions amongst the parts of the system for this property" (1997: 386). As Wimsatt rightly notes, there are precious few systems that actually fulfill all four of these criteria. The proverbial heap of sand might come close. But even a pile of stones might not, since the exact shape and arrangement of the stones and the size of the pile might affect their stability (Mumford 2012). In Wimsatt's words: "Very few system properties are aggregative, suggesting that emergence, defined as failure of aggregativity, is extremely common – the rule, rather than the exception" (1997: 382).

While Wimsatt has argued strongly against reductive physicalism, other members of his Chicago School have strongly criticized nomothetic understandings of scientific knowledge. At least in the biological sciences, they contend, explanations usually appeal to mechanisms rather than laws. But just what is a biological mechanism? In a much cited paper, Peter Machamer, Lindley Darden and Carl Craver (hereafter: MDC) offer the following definition: "Mechanisms are entities and activities organized such that they are productive of regular changes from start or set-up to finish or termination conditions" (Machamer et al. 2000: 3). Let us examine their definition a little more closely. The first thing to note is that it includes both "entities" and "activities." By means of this "dual ontology", MDC seek to incorporate the insights of both "substantialist" definitions of causal mechanisms that focus on the dispositional properties of natural kinds (Cartwright 1989; Ellis and Lierse 1994; Ellis 2001;

Mumford 1998) and those of “process ontologies” that give relations pride of place (Latour 2013; Rescher 1996, 2000; Stengers 2011; Whitehead 1978). It is also worth noting that MDC themselves give priority to activities, and for much the same reasons as MM gives priority to practice in its conception of persons, namely: First, they argue that we learn about the causal nexus of the world through our own activity in the world, regardless of whether “we” means scientific researchers or young children. Second, they argue that entities exert their powers only via activities (Machamer 2004). This leads to a third point: causation is first and foremost about “production”, not conjunction, correlation, or relevance, as the Humeans and neo-Humeans have variously asserted (Glennan 1994). Now, as some critics pointed out (Bogen 2005), the reference to “regularity” might seem to put MDC back in the Humean camp, with its actualist prejudices. However, members of the Chicago School quickly clarified that mechanisms are always regular in their *activities* but not necessarily in their *occurrences* (Craver 2006; Darden 2006; Glennan 2010). Consider the “fight or flight response.” Its operation may be regular, but its initiation is irregular. Another attractive feature of MDC’s definition that bears emphasis is their notion of start-up and finishing conditions. The advantage of this formulation is that it captures the temporal dimension of causal mechanisms without recourse to an events-ontology.

If one commonality between the Chicago School and CR/MM approaches is a commitment to mechanistic explanation and a rejection of nomothetic ones, another is a strong embrace of a layered ontology and a concomitant suspicion of ontological smallism. Biological mechanisms can rarely be fully described within a flat ontology. This is because the entities that comprise them often vary significantly in size or scale. What is more, the activities of some of these entities may depend upon those of various sub-mechanisms as well. Thus, descriptions of biological mechanisms routinely distinguish between various “levels” and frequently specify “inter-level” processes. While decomposition is often a helpful strategy for investigating mechanisms (Bechtel and Richardson 1993), so is re-composition: discovering what role a particular entity plays in a larger system can illuminate why it has the particular powers or structure that it does. Consequently, the direction of investigation in the life sciences is sometimes from large to small, rather than the other ways around. Within most areas of the life sciences, however, scientific investigation operates within a certain scalar range. MDC refer to this operative range as “topping off” and “bottoming out.” The top and bottom levels in a given field are defined through the interplay of disciplinary convention and explanatory relevance. That is to say, that researchers typically have a tacit feel for the scalar range within which they typically search for causal mechanisms, a “personal knowledge” based on their scientific training and theoretical tools. However, they will sometimes breach or move these ontological boundaries in search of a fuller description of the mechanisms they are investigating.

While the Chicago School approach provides a powerful critique of reductive physicalism and ontological smallism, premised on a mechanistic epistemology and a layered ontology, it has thus far been less successful in effecting a reflation of causality. To be sure, MDC’s distinction between entities and activities does point towards the Aristotelian distinction between material and efficient causation. What

is more, MDC's frequent references to the "organization" and "function" of mechanisms and systems gestures towards the categories of "formal" and "final" causation. But in the end, MDC understand causation exclusively in terms of activity, which is to say, in terms of effective causation. Consider the following passage:

In our view, the phrase 'top down causation' is often used to describe a perfectly coherent and familiar relationship between the activities of wholes and the behaviors of their components, but the relationship is not a causal relationship. Likewise, the phrase 'bottom-up causation' does not, properly speaking, pick out a causal relationship. Rather, in unobjectionable cases both phrases describe mechanistically mediated effects. Mechanistically mediated effects are hybrids of constitutive and causal relations in a mechanism... (Craver and Bechtel 2007: 547)

Elsewhere, however, they note that (1) the operation of a mechanism typically depends upon the causal powers of its constituent parts; (2) the organizational form of a causal mechanism both constrains and enables the causal powers of its constituent parts; and (3) the analysis of a mechanism generally requires knowledge of its end state or function (Craver 2001). Why we should not see these relations as causal ones – specifically, material, formal and final – is not at all clear, at least not to me.

2.4 Ontological Dis/Analogies Between Biological and Social Mechanisms

The Chicago School approach provides some useful arguments against reductive physicalism. Specifically, it delivers an open challenge to the natural imaginary bequeathed to us by the mechanistic thinkers of the seventeenth century. For them, the work of science was like watching a game of billiards. All the action takes place in a two-dimensional closed system and consists of energy transfers between point particles resulting in motion that obeys the basic rules of Euclidean geometry. Or so the observer may infer after watching repeated rounds of the game. That such interactions presume not only a closed system but human intervention – that the interactions themselves are, in this sense, humanly created – is quickly forgotten. Let us call this the billiard-ball ontology.

Of course, it is no longer clear how far the billiard-ball ontology actually obtains for the atomic world, not to speak of the quantum world. Be that as it may, it is quite clear that the billiard-ball ontology generates a highly inadequate understanding of the biological realm. Let us simply note some gross contrasts to establish this point. To begin, no biological system is perfectly closed. Indeed, one definition of a living organism is that it absorbs external energy in order to sustain internal order. Further, interactions between biological systems typically involve much more than energy transfers. A cell can become infected by a malicious virus, for instance, and an ecosystem can be invaded by a new species.

A second major point of difference is that biological processes occur in four dimensions, rather than two. The third dimension is the spatial dimension of physical scale. Biological entities vary enormously in size from small proteins through

mid-sized organisms to vast ecosystems, and many important causal mechanisms are cross-scalar. The fourth dimension is the temporal one of historical time. Of course, time also matters in the mechanistic world of the billiard-ball ontology but in a purely physical rather than genuinely historical sense. Collisions between billiard balls occur in time. And they lead to new configurations. But the basic parameters of the system and the laws of interaction governing its components do not change. Not so in the biological realm. There, new entities may emerge over time (e.g., molecules, mutations, species, behaviors, niches and so on), creating the possibilities of fundamentally new types of powers and interactions: organisms that can walk or fly, populations that can split or migrate and so on. Meanwhile, the sorts of change that are likely to occur and endure are constrained by changes that have taken place in the past. For example, evolutionary adaptations are constrained by the body plans of organisms (Stadler et al. 2001). Finally, at least some biological entities engage in purposive activity, oriented, at minimum, to physical survival and biological reproduction. In short, material, formal and final causality play a much larger role in the biological world than in the physical world at least as that world is conceived in the mechanistic imaginary.⁵

Let us now turn from the dis-analogies between the physical and biological realms to the analogies between the biological and social realms. There are many. They, too, can be conceived in terms of Aristotle's four types of causation. Let us begin with the material. Human inventiveness continues to bring new entities into the world thereby creating the possibility of new structures and mechanisms. The transportation and communications revolutions of the modern era provide many illustrations (steamships, automobiles, telephones, the internet and so on). Of course, one can also think of artifacts in instrumental terms, as technical means to human ends and, in this way, fold them back into the category of efficient causation. And indeed, that is how most social scientists do tend to think about artifacts, perhaps for that very reason. However, one can – and should – also think of them as material causes of new forms of social organization. Didn't the invention of the railroad contribute to the development of national consciousness? Wasn't the mass produced automobile a material cause of American suburbanization? Wasn't the creation of the internet a material cause of new forms of social networks?

The second analogy, already touched on, concerns formal causation. One of the most common and consequential types of formal causation in the social world is "path dependency" in which established forms of social organization place powerful downstream constraints on subsequent developmental trajectories (Mahoney 2000; Pierson 2004). The paradigmatic example is the QWERTY keyboard. But there are other types as well. Sociologists of organization have long noted the strong

⁵The foregoing examples also help us to see where the implications of the Chicago School go somewhat beyond the conclusions drawn by MDC. As I noted at the conclusion of the previous section, MDC acknowledge the significance of what were traditionally referred to as material and formal causes, but decline to refer to them as causes, presumably because they operate synchronically, whereas causation (since Hume) is presumed to be diachronic. Note, however, that the examples just given suggest that material and formal causation may also operate diachronically.

tendencies towards structural “isomorphism” within any given social “field” (higher education, automobile companies, etc.) (Powell and DiMaggio 1991). One reason may be that there are certain well-established ways of doing things in certain domains of social life and new entrants into the domain tend to imitate them to one degree or another. But again, social scientists often tend to conceive of social forms in instrumental or strategic terms so as to subsume them into models of efficient causation. But isn’t this too simple? Don’t social forms also constrain actors’ strategies? Indeed, don’t the dominant forms even “choose” or at least advantage some actors over others? If so, then perhaps it is best to speak of formal causation.

That we should find the Aristotelian schema helpful for thinking about causation in the biological world is hardly surprising. After all, it developed out of Aristotle’s zoological researches. More interesting, perhaps is that we should find it generative in the social domain as well. Of course, biological analogies have a long history in social science. They were frequently deployed by earlier generations, from Spencer and Durkheim through Malinowski and Parsons. But the well-known shortcomings of evolutionary and functionalist approaches should also give us pause and prompt us to reflect on the dis-analogies as well. They, too, are not hard to find.

Let us begin with the material causes of biological and social structures. The building blocks of biological structures are primarily, naturally occurring, material substances, including animal species and populations. By contrast, even moderately complex social structures are minimally composed of: (1) human persons (qua “actors” or “agents”); (2) physical artifacts (e.g., machines, buildings); (3) symbolic systems (e.g., rituals, rules). The contrast should not be overdrawn, of course. Some animals do build things, typically shelters. And some of the higher mammals also appear to be capable of a fairly high degree of intra-species communication. But these latter capacities are far more developed in human animals, opening qualitatively different possibilities. The crucial point is that social structures contain a much higher proportion of artifactual and symbolic elements than one finds even in the most highly developed communities of non-human social animals (e.g., social insects and primates).

Now, let us turn from matter to form. In the biological domain, the form of a structure is often the result of the spatio-temporal organization of naturally occurring matter, such that the microphysical arrangement of the component parts constrains the causal powers of those parts while creating new, higher-order causal powers. In the social domain, by contrast, the form of a structure (also) involves symbolically mediated relations between human persons and artifacts, which coordinate and magnify the causal powers of individual actors. As a result, social structures cannot be properly understood in a purely spatio-temporal manner. We could not understand or even categorize a human institution (e.g., a “bank” or a “college”) simply by observing the placement and movement of persons in a building. To this degree, the old interpretivist critique of “behavioral” social science was spot on. However, interpretivists sometimes imply that social structures are reducible to human interactions, and this is not quite right either. Why? Because of the artifactual element. Buildings, for example, are important to the operations of banks

and schools, because they constrain and enable certain patterns of interaction and cooperation.

What about final causes? Since Darwin, final causation has been declared anathema within the biological sciences. Of course, as critical observers such as Etienne Gilson noted early on, Darwinian theory cannot really do without something very much like final causation (Gilson 1984). For instance, at the level of the organism, it must presume a will to survive and/or reproduce. Meanwhile, at the level of the species, it must presume something like a developmental tendency towards adaptation and/or fitness. Be that as it may, the reflective capacities generated by human language mean that human behavior is not fully intelligible without reference to some sort of finality (Sehon 2005). Why? Because human beings are forever making plans and telling stories (Ricoeur 1990). In making plans, they reflexively seek to pursue their concerns and attempt to relate present actions to future purposes. And in telling stories, they relate past actions to future purposes.

In this section, I have argued that structures and mechanisms in the biological and social realms are not easily handled within the framework of the billiard ball ontology with its deflated view of causation. More positively, I have argued that an Aristotelian approach to ontology and causation provides a far more fruitful starting point, because it restores the scalar and historical dimension to structure and the material, formal and final aspects of causation. Whether it provides an appropriate ending point is beyond the scope of this essay. This much seems certain however: a non-reductive ontology and a pluralist approach to causation would help to resolve some of the persistent aporia that the physicalist imaginary has bequeathed to the modern social sciences.

2.5 Conclusion: Mechanisms or Powers?

CR and MM first embraced the mechanisms concept as an alternative to the nomothetic model of scientific explanation championed by logical positivists. Should they continue to do so? I am of two minds about this. On the one hand, there are good intellectual reasons for abandoning the concept. At the same time, there are also good pragmatic and theoretical ones for retaining it.

The fundamental problem with the mechanisms concept is that it primes a whole series of fallacious assumptions about social ontology, specifically: smallism, physicalism, invisibilism and sequentialism. We have already encountered the first two. By smallism, I mean the tendency to privilege smaller units of analysis over larger ones. By physicalism, I mean the tendency to conceptualize interactions in terms of physical contact and energy transfers. However fruitful these heuristics may have proven for the development of mechanistic physics, they have now outlived their usefulness within physics and have proven less useful in the biological domain, where causal mechanisms may include units that differ significantly in scale and even less useful in the social domain where interactions between units are symbolically as well as physically mediated. The mechanisms concept also tacitly implies

that causal processes are invisible to social actors and can only be revealed by social analysts. This is not always the case. Social actors may be quite aware that they are enmeshed in an exploitative relationship. Indeed, they can and do create institutions for the express purpose of dominating others! The final fallacy I would like to touch on is sequentialism. The mechanisms concept implies that a past occurrence can only affect the present by means of a spatio-temporally connected series of physically specifiable interactions. This is manifestly untrue in social life. The most obvious and important counter-example concerns memory. Various forms of social memory – individual and collective, neuronal and historical, traumatic or foundational – may exert an ongoing effect across time (Assmann 2011; Halbwachs 1992; Olick and Robbins 1998). As a result, past events can become a part of a social mechanism, and dead people can be social actors.

The mechanistic approach was supposed to seal the break with logical positivism. In this, it has not succeeded. Why? Because logical positivism is also premised on the physicalist imaginary. This is why anti- and demi-realist versions of causal mechanisms have proliferated in recent years. Crypto-positivists, neo-Humeans, and semi-realists have all embraced the mechanisms concept as a halfway house between nomothetic and fully realist forms of social science.

And yet, it is perhaps for this very reason that proponents of CR and MM should think twice before letting go of the mechanisms concept. It has become an important focus of intellectual debate, with contending schools attempting to impose their preferred definitions on it. There are also important theoretical and political reasons not to let go just yet: the mechanisms concept reminds us that there are fairly regular but non-observable processes in the social world, even today. For example, however much the technological means of modern capitalism have been transformed, the inner logic of capital accumulation is not really as different as some observers suggest. Nor should the rapidity with which capital – and information – now circulate around the globe lead us to imagine that these mechanisms and structures have all dissolved into “contingencies” and “flows” whose only properties are “risk” and “acceleration.” Social life is not that fleeting, even in the morphogenetic society. For all these reasons, social scientists should not give up trying to identify the causal mechanisms that shape our world. To do so would be an abdication of their proper vocation.

References

- Andersen, P. B. (2000). *Downward causation: Minds, bodies and matter*. Aarhus: Aarhus University Press.
- Archer, M. S. (1979 [2013]). *Social origins of educational systems*. London; Sage.
- Archer, M. S. (1985 [1982]). Structuration vs. morphogenesis. In S. N. Eisenstadt & H. J. Helle (Ed.), *Macro-sociological theory. Perspectives on sociological theory: Vol. 1. Sage studies in international sociology*. New York: Sage.
- Archer, M. S. (1995). *Realist social theory: The morphogenetic approach*. Cambridge/New York: Cambridge University Press.

- Assmann, J. (2011). *Cultural memory and early civilization: Writing, remembrance, and political imagination*. New York: Cambridge University Press.
- Bechtel, W., & Richardson, R. C. (1993). *Discovering complexity: Decomposition and localization as strategies in scientific research*. Princeton: Princeton University Press.
- Bhaskar, R. (1975). *A realist theory of science*. London: Verso.
- Bhaskar, R. (1979). *The possibility of naturalism: A philosophical critique of the contemporary human sciences*. Atlantic Highlands: Humanities Press.
- Bhaskar, R. (1986). *Scientific realism and human emancipation*. London: Verso.
- Bhaskar, R. (2002). *From science to emancipation: Alienation and the actuality of enlightenment*. New Delhi: Sage Publications.
- Blalock, H. M. (1967). Path coefficients versus regression coefficients. *American Journal of Sociology*, 72(6), 675–676.
- Blalock, H. M. (1968). Theory building and causal inferences. In H. M. Blalock & Ann Blalock (Eds.), *Methodology in social research* (pp. 155–198). New York: McGraw-Hill.
- Bogen, J. (2005). Regularities and causality; Generalizations and causal explanations. *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, 36(2), 397–420.
- Bollen, K. A. & Pearl, J. (2013). Eight myths about causality and structural equation models. In *Handbook of causal analysis for social research* (pp. 301–328). Dordrecht: Springer.
- Boudon, R. (1974). *Education, opportunity, and social inequality: Changing prospects in Western society*. New York: Wiley.
- Boudon, R. (1976). Comment on Hauser's review of education, opportunity, and social inequality. *American Journal of Sociology*, 81(5), 1175–1187.
- Boudon, R. (1991) What middle-range theories are. *Contemporary Sociology: An International Journal of Reviews*, 20(4, July 1991), 519–522.
- Broad, C. D. (1929). *Mind and its place in nature*. New York: Harcourt, Brace and Company.
- Brooks, E. C. (1989). Realism in social science. *Berkeley Journal of Sociology*, 34(ArticleType: book-review/Issue Title: Symposium on the Foundations of Radical Social Science/Full publication date: 1989/Copyright © 1989 Regents of the University of California):271–280. doi:[10.2307/41035419](https://doi.org/10.2307/41035419).
- Campbell, D. T. (1974). Downward causation. In F. J. Ayala & T. Dobzhansky (Eds.), *Studies in the philosophy of biology* (pp. 179–176). Berkeley/Los Angeles: University of California Press.
- Cartwright, N. (1989). *Nature's capacities and their measurement*. Oxford: Clarendon Press/Oxford University Press.
- Coleman, J. S. (1994). *Foundations of social theory*. Cambridge, MA: Harvard University Press.
- Craver, C. F. (2001). Role functions, mechanisms, and hierarchy. *Philosophy of Science*, 20(4, July 1991), 53–74.
- Craver, C. F. (2006). When mechanistic models explain. *Synthese*, 153(3), 355–376.
- Craver, C. F., & Bechtel, W. (2007). Top-down causation without top-down causes. *Biology and Philosophy*, 22(4), 547–563.
- Darden, L. (2006). *Reasoning in biological discoveries*. New York: Cambridge University Press.
- Demeulenaere, P. (2011). *Analytical sociology and social mechanisms*. Cambridge: Cambridge University Press.
- Duncan, O. D. (1966). Path analysis: Sociological examples. *American Journal of Sociology*, 72(1), 1–16.
- Ellis, B. (2001). *Scientific essentialism*. Cambridge: Cambridge University Press.
- Ellis, B., & Lierse, C. (1994). Dispositional essentialism. *Australasian Journal of Philosophy*, 72(1), 27–45.
- Elster, J. (1983). *Explaining technical change: A case study in the philosophy of science*. Cambridge: Cambridge University Press.
- Elster, J. (1989). *Nuts and bolts for the social sciences*. Cambridge: Cambridge University Press.
- Elster, J. (1999). *Alchemies of the mind: Rationality and the emotions*. Cambridge: Cambridge University Press.

- Elwert, F. (2013). Graphical causal models. In *Handbook of causal analysis for social research* (pp. 245–273). Dordrecht: Springer.
- Elwert, F. & Winship, C. (2010) Effect heterogeneity and bias in main-effects-only regression models. In *Heuristics, probability and causality: A tribute to Judea Pearl* (pp. 327–336). College Publications.
- Feser, E. (2004). *Aquinas*. Oxford: Oneworld.
- Funkenstein, A. (1986). *Theology and the scientific imagination from the middle ages to the seventeenth century*. Princeton: Princeton University Press.
- Gaukroger, S. (2006). *The emergence of a scientific culture science and the shaping of modernity 1210–1685*. Oxford: Oxford University Press.
- Gerring, J. (2008). The mechanistic worldview: Thinking inside the box. *British Journal of Political Science*, 38(01), 161–179.
- Gilson, E. (1984). *From Aristotle to Darwin and back again: A journey in final causality, species and evolution* (J. Lyon, Trans.). Notre Dame: University of Notre Dame Press.
- Glennan, S. (1994). Why there can't be a logic of induction. In *PSA: Proceedings of the Biennial meeting of the philosophy of science association*. Volume 1: Contributed papers (pp. 78–86). University of Chicago Press.
- Glennan, S. (2010). Mechanisms. In H. Beebe, C. Hitchcock, & P. Menzies (Eds.), *The Oxford handbook of causation*. Oxford: Oxford University Press.
- Gorski, P. S. (2009). The ecipes model: A critical realist approach to causal mechanisms. In P. Hedström & B. R. Wittrock (Eds.), *Frontiers of sociology* (pp. 147–194). Leiden: Brill.
- Gorski, P. S. (2013). Beyond the fact/value distinction: Ethical naturalism and the social sciences. *Society*, 50(6), 543–553.
- Gross, N. (2009). A pragmatist theory of social mechanisms. *American Sociological Review*, 74(3), 358–379.
- Hagenaar, J. A. (2004). *Elaboration (Lazarsfeld's method of)*. *The Sage encyclopedia of social science research methods*. Thousand Oaks: Sage Publications.
- Halbwachs, M. (1992). *On collective memory*. Chicago: University of Chicago Press.
- Harré, R. (1970). *The principles of scientific thinking*. Chicago: University of Chicago Press.
- Harré, R., & Madden, E. H. (1975). *Causal powers: A theory of natural necessity*. Ottawa: Rowman and Littlefield.
- Hauser, R. M. (1976). On Boudon's model of social mobility. *American Journal of Sociology*, 81(4), 911–928.
- Hausman, D. M. (1981). John Stuart Mill's philosophy of economics. *Philosophy of Science*, 48(3), 363–85.
- Healy, K. (1998). Conceptualising constraint: Mouzelis, Archer and the concept of social structure. *Sociology*, 32(03), 509–522.
- Hedström, P. (2005). *Dissecting the social: On the principles of analytical sociology*. Cambridge: Cambridge University Press.
- Hedström, P. (2008). Studying mechanisms to strengthen causal inferences in quantitative research. In Janet M. Box-Steffensmeier, Henry E. Brady & David Collier (Eds.), *The Oxford handbook of political methodology* (pp. 319–335). Oxford: Oxford University Press.
- Hedström, P. & Bearman, P. (2009a) *The Oxford handbook of analytical sociology*. Oxford/New York: Oxford University Press
- Hedström, P. & Bearman, P. (2009b). What is analytical sociology all about? An introductory essay. In *The Oxford handbook of analytical sociology* (pp. 3–24).
- Hedström, P., & Swedberg, R. (1996). Social mechanisms. *Acta Sociologica*, 39(3), 281–308.
- Hedström, P., & Swedberg, R. (1998). *Social mechanisms: An analytical approach to social theory*. Cambridge: Cambridge University Press.
- Hedström, P., & Ylikoski, P. (2010). Causal mechanisms in the social sciences. *Annual Review of Sociology*, 36, 49–67.
- Hitchcock, C. (2001). The intransitivity of causation revealed in equations and graphs. *The Journal of Philosophy*, 98(6), 273–299.

- Hoerl, C., McCormack, T., & Beck, S. R. (2011). *Understanding counterfactuals, understanding causation: Issues in philosophy and psychology*. Oxford: Oxford University Press.
- Isaac, J. C. (1987a). Beyond the three faces of power: A realist critique. *Polity*, 20, 4–31.
- Isaac, J. C. (1987b). *Power and Marxist theory: A realist view*. Ithaca: Cornell University Press.
- Joas, H. (1996). *The creativity of action*. Cambridge: Polity Press.
- Kendall, P. L., & Lazarsfeld, P. F. (Eds.). (1950). *Continuities in social research: Studies in the scope and method of "The American Soldier"*. New York: Free Press.
- Kim, J. (1979). Causality, identity, and supervenience in the mind-body problem. *Midwest Studies in Philosophy*, 4(1), 31–49.
- Kim, J. (1987). "Strong" and "Global" supervenience revisited. *Philosophy and Phenomenological Research*, 48(2), 315–326.
- Kim, J. (1993). Can supervenience and 'Non-Strict Laws' save anomalous monism? In his *Mental causation* (pp. 19–26). Cambridge and New York.
- Kim, J. (1999). Making sense of emergence. *Philosophical Studies*, 95(1), 3–36.
- Kim, J. (2000). Making sense of downward causation. In *Downward causation* (pp. 305–321). Denmark: Aarhus University Press.
- Kim, J. (ed) (2002). *Supervenience*. Brookfield, Vermont: Ashgate Publishing.
- Kim, J. (2005). *Physicalism, or something near enough*. Princeton: Princeton University Press.
- Kim, J. (2011). *Philosophy of mind*. Boulder: Westview Press.
- Knight, C. R., & Winship, C. (2013). The causal implications of mechanistic thinking: Identification using directed acyclic graphs. In S. L. Morgan (Ed.), *Handbook of causal analysis for social research* (pp. 275–300). New York: Springer.
- Land, K. C. (1969). Principles of path analysis. *Sociological Methodology*, 1, 3–37.
- Latour, B. (2013). *An inquiry into modes of existence: An anthropology of the moderns* (C. Porter, Trans.). Cambridge: Harvard University Press.
- Lazarsfeld, P. F. (1955). Interpretation of statistical relations as a research operation. In his *The language of social research* (115–125). Glencoe, IL: The Free Press.
- Lear, J. (1988). *Aristotle: The desire to understand*. Cambridge: Cambridge University Press.
- Lewis, D. (1973a). Causation. *The Journal of Philosophy*, 70(17), 556–567.
- Lewis, D. (1973b). *Counterfactuals*. Cambridge, MA: Harvard University Press.
- Lewis, D. (2000). Causation as influence. *The Journal of Philosophy*, 97(4), 182–197.
- Machamer, P. (2004). Activities and causation: The metaphysics and epistemology of mechanisms. *International Studies in the Philosophy of Science*, 18(1), 27–39.
- Machamer, P., Darden, L., & Craver, F. C. (2000). Thinking about mechanisms. *Philosophy of Science*, 67, 1–25.
- Mahoney, J. (2000). Path dependence in historical sociology. *Theory and Society*, 29(4), 507.
- Mahoney, J. (2001). Beyond correlational analysis: Recent innovations in theory and method. *Sociological Forum*, 16(3), 575.
- Martinich, A. P. (2005). *Hobbes*. New York: Routledge.
- Marx, K., Fernbach, D., Fowkes, D., & Mandel, E. (1976). *Capital: A critique of political economy*. Harmondsworth: Penguin, in association with New Left Review.
- McLaughlin, B. (1995). Varieties of supervenience. In Elias E. Savellos & Ümit D. Yalçın (Eds.), *Supervenience: New essays* (pp. 16–59). Cambridge: Cambridge University Press.
- McLaughlin, B. (2005). Supervenience. In E. L. Zalta (Ed.), *Stanford encyclopedia of philosophy*. <http://plato.stanford.edu/entries/supervenience/>
- McLaughlin, B. (2006). Supervenience. In Lynne Nadel (Ed.), *Encyclopedia of cognitive science*. Hoboken, NJ: Wiley.
- Menzies, P. (2009). Counterfactual theories of causation. In E. L. Zalta (Ed.), *Stanford encyclopedia of philosophy*. <http://plato.stanford.edu/archives/spr2001/entries/causation-counterfactual>. Palo Alto: Stanford University.
- Merton, R. K. (1949). On sociological theories of the middle range. In R. K. Merton (Ed.), *Social theory and social structure* (pp. 39–53). New York: The Free Press.
- Mill, J. S. (1986). *A system of logic, ratiocinative and inductive: Being a connected view of the principles of evidence and the methods of scientific investigation*. Charlottesville: Lincoln-Rembrandt Pub.

- Morgan, S. L. (2001). Counterfactuals, causal effect heterogeneity, and the catholic school effect on learning. *Sociology of Education*, 74, 341–374.
- Morgan, S. L. (Ed.). (2013). *Handbook of causal analysis for social research*. Dordrecht: Springer.
- Morgan, S. L., & Winship, C. (2007). *Counterfactuals and causal inference: Methods and principles for social research*. New York: Cambridge University Press.
- Mumford, S. (1998). *Dispositions*. Oxford: Oxford University Press.
- Mumford, S. (2012). *Metaphysics: A very short introduction*. Oxford: Oxford University Press.
- Murphy, N., Ellis, G. F. R., & O'Connor, T. (Eds.). (2009). *Downward causation and the neurobiology of free will*. Berlin: Springer.
- Olick, J. K., & Robbins, J. (1998). Social memory studies: From “Collective Memory” to the historical sociology of mnemonic practices. *Annual Review of Sociology*, 24(1), 105–140.
- Pearl, J. (2009). *Causality: Models, reasoning, and inference*. Cambridge: Cambridge University Press.
- Pearl, J. (2010). An introduction to causal inference. *The International Journal of Biostatistics*, 6(2), 353–379.
- Pierson, P. (2004). *Politics in time: History, institutions, and social analysis*. Princeton: Princeton University Press.
- Powell, W. W., & DiMaggio, P. (1991). *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.
- Rescher, N. (1996). *Process metaphysics: An introduction to process philosophy*. Albany: State University of New York Press.
- Rescher, N. (2000). *Process philosophy: A survey of basic issues*. Pittsburgh: University of Pittsburgh Press.
- Ricœur, P. (1990). *Time and narrative*. Chicago: University of Chicago Press.
- Sachs, J. (2004). *Aristotle's physics*. New Brunswick: Rutgers University Press.
- Sawyer, R. K. (2002). Nonreductive individualism part I—Supervenience and wild disjunction. *Philosophy of the Social Sciences*, 32(4), 537–559.
- Sawyer, R. K. (2005). *Social emergence: Societies as complex systems*. New York: Cambridge University Press.
- Searle, J. R. (1998). *Mind, language and society: Philosophy in the real world*. New York: Basic Books.
- Searle, J. R. (2004). *Mind: A brief introduction*. Oxford: Oxford University Press.
- Sehon, S. (2005). *Teleological realism: Mind, agency and explanation*. Cambridge: MIT Press.
- Sekhon, J. S. (2004). Quality meets quantity: Case studies, conditional probability, and counterfactuals. *Perspectives on Politics*, 2, 281–294.
- Sellars, R. W. (1916). *Critical realism: A study of the nature and conditions of knowledge*. New York: Rand McNally & Company.
- Sewell, W. H., Jr. (1996). Historical events as transformations of structures: Inventing revolution at the bastille. *Theory and Society*, 25(6), 841–881.
- Sewell, W. H., Haller, A. O., & Portes, A. (1969). The educational and early occupational attainment process. *American Sociological Review*, 34(1), 82–92.
- Sewell, W. H., Haller, A. O., & Ohlendor, G. W. (1970). The educational and early occupational status attainment process: Replication and revision. *American Sociological Review*, 35(6), 1014–1027.
- Shapin, S., Schaffer, S., & Hobbes, T. (1985). *Leviathan and the air-pump*. Princeton: Princeton University Press.
- Sharkey, P., & Elwert, F. (2011). The legacy of disadvantage: Multigenerational neighborhood effects on cognitive ability. *American Journal of Sociology*, 116(6), 1934.
- Sørensen, A. B. (1998). Theoretical mechanisms and the empirical study of social processes. In P. Hedström, & R. Swedberg (Eds.), *Social mechanisms: An analytical approach to social theory* (pp. 238–266). Cambridge: Cambridge University Press.
- Spirtes, P., Glymour, C., & Scheines, R. (1993). *Causality, prediction, and search*. Cambridge, MA: MIT Press.

- Stadler, B. M., Stadler, P. F., Wagner, G. P., & Fontana, W. (2001). The topology of the possible: Formal spaces underlying patterns of evolutionary change. *Journal of Theoretical Biology*, 213(2), 241–274.
- Stengers, I. (2011). *Thinking with Whitehead: A free and wild creation of concepts* (M. Chase, Trans.). Cambridge: Harvard University Press.
- Stinchcombe, A. L. (1991). The conditions of fruitfulness of theorizing about mechanisms in social science. *Philosophy of the Social Sciences*, 21(3), 367–388.
- Taylor, C. (2002). Modern social imaginaries. *Public Culture*, 14(1), 91–124.
- Taylor, C. (2007). *A secular age*. Cambridge, MA: Belknap Press of Harvard University Press.
- Whitehead, A. N. (1978). *Process and reality: An essay in cosmology*. New York: Free Press.
- Wilson, R. A. (2004). *Boundaries of the mind: The individual in the fragile sciences-cognition*. Cambridge: Cambridge University Press.
- Wilson, C. (2008). *Epicureanism at the origins of modernity*. Oxford: Oxford University Press.
- Wimsatt, W. C. (1985). Forms of aggregativity. In Alan Donagan, Anthony N. Perovich Jr. & Michael V. Wedin (Eds.), *Human nature and natural knowledge* (pp. 259–291). Dordrecht: Springer.
- Wimsatt, W. C. (1997). Aggregativity: Reductive heuristics for finding emergence. *Philosophy of Science*, 64(Supplement), S372–S384.
- Woodward, J. (2002). What is a mechanism? A counterfactual account. *Philosophy of Science*, 69(S3), S366–S377.
- Woodward, J. (2003). *Making things happen: A theory of causal explanation*. Oxford: Oxford University Press.
- Woodward, J. (2004). Counterfactuals and causal explanation. *International Studies in the Philosophy of Science*, 18(1), 41–72.
- Woodward, J. (2011). Mechanisms revisited. *Synthese*, 183(3), 409–427.
- Wright, S. (1921). Systems of mating. I. The biometric relations between parent and offspring. *Genetics*, 6(2), 111–123.
- Wright, E. O. (1987). Reflections on classes. *Berkeley Journal of Sociology*, 32, 19–49.
- Wright, E. O. (1997). Rethinking once again the concept of class structure. In his *Reworking class* (pp. 41–72). Cambridge: Cornell University Press.

Chapter 3

Mechanisms and Models: Some Examples from International Relations

Colin Wight

3.1 Introduction

A mechanisms based approach to social analysis has been gaining a foothold for some time now. Realists can take some credit for this and the idea of mechanisms is an important component of the morphogenetic approach (Archer 1995). Yet, there is still no consensus as to how mechanisms should be understood, how they relate to the language of variables, or what a commitment to mechanisms entails in terms of methodology (Gorski 2015). James Mahoney has identified 24 definitions of causal mechanisms across sociology, political science, and the philosophy of science (Mahoney 2001, pp. 579–580). Not all of these definitions are consistent with realism. For realists, a mechanisms based approach to social science is often contrasted with the covering law model of explanation. But some have argued that the covering law model and a mechanisms approach are compatible.

For example, Gary King, Robert Keohane, and Stanley Verba argue that “an emphasis on causal mechanisms makes intuitive sense: any coherent account of causality needs to specify how its effects are exerted” (King et al. 1994, pp. 85–86). For King et al. mechanisms are simply an additional variable in a chain of events that connect cause and effect (King et al. 1994, p. 87). Yet as Mahoney suggests, “the notion of mechanisms as intervening variables ultimately falls back on correlational assumptions: a variable’s status as a ‘mechanism’ as opposed to an ‘independent variable’ is arbitrary... A correlation is ‘explained’ simply by appealing to another correlation of observed variables” (Mahoney 2001, p. 578). This preserves the covering law model of explanation, but it is not consistent with a realist treatment of mechanisms. In addition, neo-positivists refer to mechanisms yet deny that they have ontological status. Although this is, perhaps, the dominant way mechanisms

C. Wight (✉)

Department of Government and International Relations, University of Sydney,
Sydney, NSW, Australia
e-mail: colin.wight@sydney.edu.au

are dealt with in the literature it is not a position realists can embrace. Thus although references to mechanisms are now the norm across the social sciences, these are largely embedded within assumptions that are grounded in neo-positivism, not realism.

There is an additional problem when we use the notion of mechanisms. Whenever we invoke a concept, we explicitly, or implicitly, imply a set of associated concepts. Meaning is never a singularity; it is relational. All words gain their meaning from within the complex social and linguistic webs that allow the invoked term to function in particular ways and rule out other meanings. Within social realism, the concept of mechanism develops out of scientific realism. This makes sense. Roy Bhaskar's defence of the possibility of naturalism, and a realist social science, was not possible without the antecedent development of a realist alternative to positivism (Bhaskar 1975, 1989). The problem, however, is that the concept of mechanisms was largely developed in the context of the physical, not the social sciences. Thus, when the term was transferred into the social realm it brought with it, its implicit, and associated, concepts. This explains why concepts such as reductionism, generality, uncovering, mechanistic, and determinism are often thought to be closely associated with the concept of mechanism. This way of thinking about mechanisms makes some sense in the physical sciences but not in the social sciences.

In this chapter, I attempt to unpack the concept of mechanism and provide the outlines of what I consider to be the essential elements of a social realist treatment of mechanisms. I then use this understanding to outline some methodological principles that follow from the realist account of mechanisms. Finally, I provide an illustrative example of how this framework might be employed in terms of understanding some important changes in international relations, in particular, relating to the internet and social media.

3.2 Mechanisms and Associated Concepts

Underlying virtually all approaches to mechanisms is an attempt to make social outcomes intelligible by explaining how they were brought about. Few would disagree with Jon Elster, that, to “explain an event is to give an account of why it happened. Usually...this takes the form of citing an earlier event as the cause of the event we want to explain... [but] to cite the cause is not enough: the causal mechanism must also be provided, or at least suggested” (Elster 1989, pp. 3–4). Beyond this, there is very little agreement on how mechanisms should be understood, what mechanisms are, and what things can and cannot be a mechanism.

One fundamental dispute concerns the ontological status of mechanisms. There are two competing ways to approach this issue. The first is to define mechanisms as “analytical constructs that provide hypothetical links between observable events” (Hedström and Swedberg 1998, p. 13). This is essentially an instrumentalist treatment of the term. On this view, mechanisms have no existence until posited in theories; they are purely hypothetical entities. There are three major problems with this approach.

First, it is at odds with the practice of science. Scientists generally do not simply postulate a mechanism and then stop inquiry if prediction and/or control follow. Scientists almost always attempt to ascertain if the posits possess the properties ascribed to them in their theory (Hacking 1983; Ziman 2002). Social scientists do, or at least should do the same, even if not in the same manner. Without this commitment to realism we could not explain the search for dark matter or make sense of what the scientists working at CERN were up to. Second, the analytical approach to mechanisms lets the theorist off the ontological hook. If theoretical posits (mechanisms in this instance) are not attempts to refer to real entities, the theorist has no obligation to give a full account of them. There is no possibility of ascribing powers to something that we do not believe exists. In fact, on an instrumental treatment of mechanisms we can ascribe any powers and liabilities to them as long as they facilitate the explanation. We know what requires explaining and hence we invent something that if it existed would provide the explanation. If the invented mechanism allows us to predict and control matters, we can say we have a good theory (Friedman 1966, pp. 3–16, 30–43). Third, the analytical view can make no sense of how prediction and control are possible; it fails to describe the mechanisms through which knowledge of mechanisms is turned into control and manipulation outside of the explanatory context. Something that is not real cannot be manipulated and/or controlled.

Morphogenesis, when committed to realism, requires a definition that treats mechanisms as ontological. Claims about mechanisms are attempts to grasp real processes, events and things. Indeed, “an explanation proper consists in unveiling some lawful mechanism” (Bunge 2004, p. 182). For realists, an explanation provides an account of how the underlying mechanisms work. The existence of the mechanisms is not dependent upon their specification in theory and the mechanisms would continue to work even if not yet identified. As Bhaskar puts it, the “construction of an explanation for ... some identified phenomenon will involve the building of a model ... which *if* it were to exist and act in the postulated way would account for the phenomenon in question” (Bhaskar 1979, p. 15). Mechanisms posited in theories, then, are *claimed* to exist. Note the stress on the *claimed*. A scientific realist interpretation of mechanisms does not entail that all mechanisms suggested in every theory do exist.

I distinguish between two important types of social mechanisms: control and causal mechanisms. Although this is a distinction that makes a difference, it is important not to draw it too firmly since in certain instances, one type of mechanism can operate as the other. The first type of mechanism is that of social control. Thus, for example, we talk of mechanisms to monitor and control student attendance at university; we talk of arms control mechanisms; or mechanisms to ensure the efficient collection of taxes. According to this view, a mechanism is a process or technique for achieving a desired end state or outcome. Often, when we refer to social mechanisms this is what we mean; the arrangement or relation of the parts that are configured to produce an effect. The idea of producing “an effect” demonstrates the close relationship between control mechanisms and causal mechanisms, and hence the reason why we should be wary of drawing the distinction between them too sharply.

Although mechanisms of social control can evolve slowly or spontaneously and effect (hence be considered causal) outcomes in an unknown manner, in the vast majority of instances they are intentionally designed. Hence, although unobservable, they are generally not unknown. Indeed, in many instances, because of their function in relation to desired outcomes very much is known about them. For this reason, the metaphors of uncovering, unveiling, or discovering are not integral to the concept of mechanism. Equally, although control mechanisms attempt to influence social processes, they do not always succeed, and in many respects, knowledge of the mechanism helps to facilitate noncompliance. Hence, students can play the system and avoid attending university sessions; governments can circumvent arms control procedures; and tax avoidance is endemic, and in many respects institutionalised, precisely because the mechanisms of collection are so well known. This is also one reason why the concept of a mechanism does not necessarily involve the concept of determinism.

The second important type of mechanism much deployed in social science is that of a “causal mechanism”; sometimes “generative mechanism”. In general, it refers to the operative or motive part, process, or factor, in a system that produces a result. In this sense, a causal mechanism can be regarded as the process, or state of affairs involved in, or responsible for, an action, reaction, or outcome of a natural or social phenomenon. For realists, explanation by way of causal mechanisms is often contrasted to the covering-law model of explanation. However, according to Daniel Little (1998, p. 211), explanation via mechanisms is compatible with the covering-law model, because laws do not explain; rather, it is the mechanisms that provide the explanation. For Little, the covering-law model of explanation provides us with the law, whilst the mechanism explains why the law holds. Bhaskar, on the other hand, has suggested an account of laws not embedded within the covering-law model (Bhaskar 1975). Laws can be understood as statements that describe the operation of mechanisms, and not a description of the conjunction between events of type A and events of type B. Clearly, to Realists mechanisms are not statements about experiences, or events, but are claims about the way things act in the world independent of their being experienced.

Many causal mechanisms can exist beyond the realm of what we experience. What we experience emerges out of a complex interaction of these multiple mechanisms, which in controlled experimental settings produce the observed regularities. Yet, these same mechanisms also generate effects in the world beyond the laboratory and interact in complex ways. In certain settings, mechanisms can, even in open systems, produce particular recurring and regular outcomes, whilst at other times interacting mechanisms can result in the suppressing or complete neutralisation of the generative effects of the particular mechanism in question (Sayer 1992, p. 100). In open systems, and given the contingency and flux of the social world, where multiple mechanisms are also constantly interacting, mechanisms cannot be deterministic. Hence, the outcome of a particular process cannot be determined a priori by knowing the type of mechanism that is at work. This suggests that so-called laws relating to mechanisms do not express universal and necessary generalities, but rather, should be understood as tendencies – at most – generated by

mechanisms operative within open systems. Equally, mechanisms can exist without their power being exercised, in which case they are best understood as “potentialities”, and, in certain instances, may need a trigger, or to reach a tipping point, before becoming operative.

This allows us to identify something important when we use the term mechanism in social explanations. Given that all social systems are open, and that a range of interacting mechanisms will typically constitute them, what we mean when we identify one mechanism among many, is to imply that this mechanism is important in some way. This requires that explanation via mechanisms must specify the powers and propensities of that particular mechanism and identify the causal tendencies produced by it, as well as specifying when those tendencies might and might not be manifest. This makes an explanatory framework based on mechanisms more complex and difficult than the covering law model, but it is also more realistic about the social order.

Focusing on the powers and dispositions expressed as tendencies illustrates why generality is also not integral (at least not always) to the concept of a causal mechanism. What is often important, particularly in terms of social explanation, is that we are able to specify the sequence of events and processes (the causal complex) that lead to particular events. Sometimes social events are caused by a unique configuration of mechanisms; a configuration that may never occur again – the end of the Cold War, for example, or the uprisings referred to as the Arab Spring (Dabashi 2012). But to say that generality is not essential to the concept of mechanism is not to say that an event is uncaused, or that we are unable to identify mechanisms that have strong tendencies in most circumstances. The specification of the object of inquiry is important here. If we are interested in explaining significant events, then generality may play less of a role, whereas if processes are the focus, then the level of generality may be high. In addition, whilst we need to be attuned to the specificity of many social processes and events, significant moments, such as the end of the Cold War and the Arab Spring, can still be brought under a general description (revolution, for example, in other cases) in which mechanisms with strong tendencies might be operating.

Some have also rejected the concept of mechanisms because it seems to imply a mechanistic, non-dynamic process that unfolds in a linear, clockwork manner (Patomaki 2002, Chap. 4). In other words, a mechanism is held to refer not to determinism, but to a process that, once under way, seems to have a clear, well-defined outcome. Obviously, it is easy to think that mechanisms are mechanistic, but realists insist that they are not (Bhaskar 1993, p. 186; Bunge 1997, p. 411; Machamer et al. 2000, p. 2). The idea that mechanisms might be mechanistic relies on misguided assumptions about the system rather than the concept of mechanisms itself. Mechanisms could only be mechanistic if one assumed that the system in which they operate was equivalent to something like a well-designed machine in which each part has its role and function; and if it was thought that all systems were closed. Realists do not view systems in this way, they embrace a view that stresses the dynamic complexity of systems, in which multiple mechanisms interact (together with unforeseen contingencies) to produce outcomes.

A further issue concerns the problem of reductionism. Jon Elster has suggested that the aim of a mechanisms based approach is to seek explanation at a lower level than the explanandum:

The role of mechanisms is two-fold. First, they enable us to go from the larger to the smaller: from molecules to atoms, from societies to individuals...The success of the reduction is constrained by the extent to which macro-variables are simultaneously replaced by micro-variables...The search for micro-foundations...is in reality a pervasive and omnipresent feature of science. (Elster 1989, pp. 23–24)

In the social sciences, this commitment to reductionism tends to lead to the belief that explanation via mechanisms is embedded within methodological individualism (Hedström and Swedberg 1998, p. 12). According to Hedström and Swedberg, what provides the inextricable link between methodological individualism and a mechanisms based approach is the fact that in the “social sciences, the elementary causal agents are always individual actors” (Hedström and Swedberg 1998, p. 11). This is confusing. It is confusing because it rests on an account of “agency” that is not applicable to both the natural and social sciences. In the natural sciences the common meaning (and the one implied by Hedström and Swedberg) attributed to agency is that of a natural force or effect on matter—an oxidizing agent, perhaps. Although this meaning can be found in the social sciences, it is much more common to find agency deployed in a more nuanced manner that locates human agency as having distinctive properties and ones that are often collective and relational rather than individual (Archer 2000).

As Gayatri Spivak has put it, “the idea of agency comes from the principle of accountable reason, that one acts with responsibility, that one has to assume the possibility of intention, one has to assume even the freedom of subjectivity in order to be responsible. That’s where agency is located” (Spivak 1996, p. 294). Valid as this is, it does not provide a comprehensive account of social agency; to argue that there is a locus of responsibility integral to agency is not to argue that this is all there is. Recognising the freedom of subjectivity should not lead to a denial of the role played by social and cultural factors in producing outcomes (Archer 2000). If Spivak’s notion of the “freedom of subjectivity” is necessary for any coherent theory of human agency, it is not sufficient. It is not sufficient, because agents in the social world are differentially located and much of their “capacity to do” (their causal power) is derived from their social positioning (Lawson 2015; Porpora 2015).

What kind of things can be mechanisms? We need a broad ontology that can incorporate a differentiated view of mechanisms. Here I follow Peter Ossorio and identify objects, processes, events, states of affairs, and relations, all of which I consider can be parts of control or causal mechanisms; or mechanisms in their own right (Ossorio 1997). What specific mechanisms govern a particular system is a matter for research, not theory, even if theory plays a necessary role in their identification and discovery. The only ontological limit on what might be a mechanism is that it possesses the powers and liabilities able to produce outcomes. From an analytical perspective, social scientists are normally interested in relatively enduring and important social mechanisms that allow explanations to cover many cases. As already noted, this implies some level of generality, but it is important to

recognise that although we often aspire to identify general mechanisms, some important causal mechanisms can be unique in terms of the outcomes they produce. In addition, in some instances it is the specific conjunction of multiple interacting mechanisms that explains a given outcome (Donati 2015).

Within a given system, one important mechanism that might be binding all the others together, and providing the structure within which the different ontological forms exist, are social relations. In many respects, since social objects are complex as opposed to simple, relations always, in part, constitute them. Relations, then, are not incidental to social objects but play a role in constituting them as objects of a particular kind. Social relations, emerge out of the positioning and activity of individuals and/or groups and their products over time (Archer 1995; Porpora 1987). Moreover, since social relations are emergent, they are frequently macro-social phenomena and exist as relations, not only between individuals, but also between the larger social processes that are also emergent. Hence, they may be operative as mechanisms in both a causal and a control sense.

Mechanism, then, is a promiscuous term that can be used to refer to any entities or processes that together produce outcomes in a system. Given that open systems are always composed of multiple interacting mechanisms, of various kinds, when a researcher, or theory, highlights a particular mechanism, it indicates that it is claimed that this mechanism, and not others, is important in some way; producing change, or stasis. Methodologically, it is important that any research identifying a mechanism clearly defines it, and specifies the powers and liabilities it possesses. Likewise, reference to mechanisms would also require some indication of how claims concerning the mechanisms can be operationalised. It is not enough simply to highlight the mechanism and detail its causal tendencies; the researcher should be able to indicate how the mechanism operates and what the potential outcomes may be. This is not prediction as such, but some indication of a range of possible outcomes should be indicated, if the norms of scientific communication are to be upheld.

In addition, it is also important to specify if there are any enabling conditions within which the mechanism might begin to operate, or be prevented from operating. This means a mechanisms based approach has to consider the context in which the mechanism functions. A consideration of the context is also important since it will facilitate judgements concerning the justifiability of transposing claims about the mechanism from one system to another. This goes to the heart of case comparisons, but there is no principled reason why mechanisms cannot operate in similar ways in different contexts. Such claims, however, would necessarily have to detail the limits of the differential space in order to meet the epistemological demands of other researchers.

Part of any context would be other mechanisms that could also play a role in activating, impeding, or affecting the operation of the mechanism in some way. However, whilst other mechanisms can be considered to be part of the context, it is important to differentiate them from it, in order to identify if particular mechanisms interact in particular ways, while all other elements of the context remain the same. Hence, whilst the overall context may remain very similar, it is possible that the emergence or introduction of a countervailing mechanism could have major

implications for outcomes. It is also possible that specific conjunctions of multiple mechanisms are required to produce an adequate explanation (Donati 2015). Sometimes this can be explained under a multi causal account, but there may be times when it becomes possible to think in terms of super-mechanisms that emerge out of the interaction of multiple mechanisms. The concept of a super mechanism also highlights another aspect of a mechanisms approach in that any postulated mechanism can, potentially at least, be broken down into its component mechanisms. The economy, for example, is routinely referred to as a mechanism, but markets also have constitutive mechanisms. Another example might be neoliberalism, defined here as the conjunction of a particular form of regulatory politics combined with a capitalist economic system.

This suggests that at a minimum a realist mechanism based approach to research should include the following:

1. The identification of some phenomenon or phenomena of interest. This could be some observed regularity, or the emergence of some new practice.
2. The postulation of one or more mechanisms that either individually or collectively would provide an explanation for these phenomena, if the former exist.
3. A description of the mechanism, identifying its putative powers, or the combined properties and powers of multiple interacting mechanisms.
4. A description of the context within which the mechanism is said to operate.
5. The identification of related or alternative mechanisms that might interact, negatively or positively, in important ways with the proposed mechanism(s).
6. An indication of what the expected outcomes might be and how they might be measured.
7. The identification of alternative contexts within which the mechanism could be operative.

Following these steps would give researchers a clear idea of how to proceed with empirical research in order to test the claims made, although I am not suggesting that these are the only steps, or that they necessarily have to be completed in this order, but they do highlight the necessary minimum conditions of a realist approach to mechanisms.

3.3 Mechanisms of Protest and Information Technology

In this section, I attempt to provide an illustrative example of how this realist approach can help illuminate something of significance in global politics today. The actual mechanisms I will propose are less important than demonstrating the validity of the approach. In addition, the example also brings together what seems a disparate set of developments in global politics and demonstrates how they are the result of the interaction of two mechanisms driving change. The events I refer to are the Arab Spring and the Occupy Wall Street (OWS) movement; as well as the emergence of organisations such as WikiLeaks and whistleblowers such as Edward Snowden.

I also link these to rapid and accelerating technological changes that have taken place over the last two decades or so, particularly in relation to the Internet and Social Media; (a period that some refer to as the Information Age) (Terranova 2004).

The relationship between the Internet and forms of dissent has been the subject of much debate (Castells 2012). It has been suggested that the new technologies are causes of the waves of protest we have witnessed over the last decade or so, and that they have brought about, or made possible, organisations such as WikiLeaks and whistle blowing such as the NSA revelations (Gerbaudo 2012; Shirky 2011). Even politicians have articulated this view, with President Erdogan explicitly blaming Twitter and Facebook for the protests in Turkey in 2013, and during the Egyptian revolution of 2010 the Mubarak regime attempted to throttle the protests by closing down the Internet (Rawlinson 2014; Williams 2011). If we were to treat mechanisms as variables, we could say that events of type A (the development of the Technology Age) have produced events of type B (the Arab Spring, OWS, WikiLeaks). An appropriately designed research project gathering data on A and B would likely produce a positive correlation in this case. But this seems superficial and it is not explanatory. The waves of protest, and WikiLeaks, may be linked but the mere emergence of the new technology cannot be a sufficient explanation of them. The new technology is not a mechanism, but an enabling condition (part of the context) and what the above phenomena highlight are deeper social processes now operating at such a level that fundamental change is underway in global politics.

I suggest that there are two social mechanisms now interacting together, and that their causal powers are enhanced by the existence of the Internet and social media, such that we have a genuine positive feedback loop. These are cyber communication, and political trust. Communication and trust are two important mechanisms in all social systems (Hetherington 2005; Luhmann 1995). The power of social communication has been dramatically increased as a result of recent technological development (Archer 2015). Political trust, on the other hand is declining, and this decline is leading to the emergence of new forms of democracy as the depth of this decline is communicated via the new technology (Keane 2009). States are losing control of the flows of information just as their legitimacy is decreasing due to the decline in political trust. Thus, what explains the power of these two mechanisms to bring about global developments, at this particular point in time, is that they are both undergoing significant change and interacting to positively reinforce one another. It is the unique conjunction of a decline in political trust and the ability of these changes to be communicated that explains the new dissent, which is expressed through the OWS movement, the Arab Spring, Wikileaks, and whistleblowing.

OWS and the Arab Spring are linked. According to the OWS website, “We are using the revolutionary Arab Spring tactic to achieve our ends and encourage the use of nonviolence to maximize the safety of all participants” (Mak 2011). OWS protesters cited the desire to expose corporate greed, gross financial inequality, and scepticism towards the idea of democratic political representation as their motives. “We are the 99 %” became the motto of the movement to highlight the way capitalism favoured the interests of the few over the many. After the OWS camp was

established in Lower Manhattan's Zuccotti Park, similar protests emerged across the United States and eventually around the rest of the world. The Guardian estimates that close to 1,000 occupy movements sprang up involving millions of protestors (Datablog 2011).

Both the Arab Spring and OWS organised information about protests through Twitter using hashtags that allowed protestors to coordinate planning, publicise the protests, or link tweets to larger discussions. Many groups developed a Facebook presence, which became focal points for information and advice. Expressions of solidarity between protesters in different countries became the norm and allowed them to demonstrate solidarity and common purpose. These examples of the potential of modern technology to influence global politics are just the tip of an iceberg that exploded onto the surface in 2010, when WikiLeaks began online publishing of videos, diplomatic cables, and other intelligence materials provided to them by US Army Private Chelsea Manning (formerly Bradley) (Beckett and Ball 2012; Leigh and Harding 2011; Sifry 2011). Although the 2010 releases were the most visible and influential of disclosures to be published on the WikiLeaks website, it has, since its inception in 2006, provided a constant stream of classified information in relation to political, economic and environmental issues. As if WikiLeaks was not bad enough for states, and in particular the US, then, in 2013, came the release of the NSA revelations by whistleblower Edward Snowden (Greenwald 2013; Greenwald et al. 2013).

From May 2013, material from over 50,000 classified documents, which Snowden had surreptitiously collected, was published in the Guardian (Greenwald 2013). The 'leaks' drew world-wide attention, leading governments to declare him a traitor; activists and protestors, on the other hand, viewed him as a hero. The highly sensitive material provided evidence of a systematic mass surveillance program undertaken by the NSA. At the heart of the revelations were a series of internet surveillance programs, such as PRISM, as well as the interception of US and European telephone metadata. The disclosures have fuelled debates over mass surveillance, government secrecy, and the balance between national security and privacy of information.

The examples above provide a snapshot of how some of this technology is impacting on global politics. In particular, the rapid transmission of news allows individuals and groups to bypass formal diplomatic channels, and necessitates quicker, and perhaps less considered, responses by government officials. Twitter, in particular, has become not only a site that relays news generated by the mainstream media, but a collection point for journalists to source the news. This technology also allows NGOs and other activist groups to disseminate their positions more widely and organize cyber campaigns that can influence political and economic decisions across the world. The anti-globalisation movement has used these communications' networks to organise global protests against globalisation and social media played a key role in the Arab Spring (Howard and Hussain 2013). Terrorist organisations have also used the Internet to recruit, coordinate their activities and spread their messages (Weimann 2006). Once these terrorist groups were beholden to mainstream media outlets for access to the audiences they crave, today they can

produce their own videos and deliver their chilling messages on YouTube and Facebook. The “Dark Web”, a section of the internet that uses complex encryption and other technologies such as Tor to conceal internet activity from surveillance, has also provided protestors, terrorists, and criminals with an effective communication tool (Chen 2012).

Prior to the emergence of this new information technology, world affairs and access to the media were largely in the hands of diplomats, national leaders and big business. Now outlets such as Facebook, Twitter, and YouTube allow everyone with access to the technology, not only to consume information, but be producers of it. The fluid and dynamic nature of internet communications enables those readers to shape, comment and contribute to the story as they pass it on. Communication is both changing and these changes are also having effects felt across the globe (Archer 2015). This makes determining fact from fiction almost impossible; the generation of hysteria, confusion and panic is an ever-present possibility. Conspiracy theories proliferate on the Internet. It is a fluid and constantly changing environment that state authorities struggle to control. Like a many headed hydra, once the state assumes it has cut off the supply of one source of information another emerges (Castells 2012; Tai 2006).

The speed and scale of these developments is almost impossible to grasp. In 2002, the United Nations estimated that 655 million people, one-tenth of the world’s population, used the Internet. By June 2012 the figure was over 2.5 billion; representing 34.3 % of the global population and a staggering growth rate in Internet penetration of 566 % since 2000 (Internet Stats). In addition, Africa is rapidly catching up with the rest of the world in terms of internet access, and as of 2012, 15.6 % of the total population have internet access and use it regularly. Whilst it is true that internet penetration in Africa is concentrated in urban areas, the ubiquity of the mobile phone threatens to change that situation in a relatively short time with seven in ten Africans already owning one (AfroBarometer 2013).

However, social media are rarely a direct cause (mechanism) of political protest. Social media can play an important role in disseminating the message and coordinating activity, but the political context always provides the immediate context for the deployment of the technology. Protestors and revolutionaries have always faced the problem of how to harness grievances and the desire for change and get people involved in political activism. What technology and social media provide are increased and participatory communication channels, and most importantly an increased ability for dissenters to organise themselves into groups (Shirky 2008). Social media are not the cause of political disenchantment, they are the means through which it is communicated and channeled. Social media have facilitated new forms of communication, as well as dramatically increasing the levels of it across the globe but it is the new forms of communication the technology allows that are bringing about social change. As such, the decline in political trust precedes the increased ability to communicate that decline. But the increased ability to communicate also feeds back onto the levels of political distrust as the new social media allow groups and individuals, such as Snowden and WikiLeaks, to highlight previously hidden aspects of state and corporate behaviour. This is a genuine case

of morphogenesis and the net effect of these two interacting mechanisms is a positive feedback loop.

Wikileaks, the wave of protest we have witnessed, and the NSA revelations are an expression of these interacting mechanisms. In many respects, the new informatics can be said to be not only bringing democracy to new parts of the world, but reconfiguring what we think democracy is, and how it functions. According to Slavoj Žižek, what “unites the protests, for all their multifariousness, is that they are all reactions against different facets of capitalist globalisation” and “an awareness that the institutionalised form of representative multi-party democracy is not equipped to fight capitalist excess, i.e. democracy has to be reinvented” (Žižek 2012). This is what binds together the Arab Spring, the wave of protests, and the emergence of phenomena such as WikiLeaks; they are all products of a decline in political trust that is communicated and amplified in the last two decades.

Underlying OWS, the Arab Spring, Wikileaks and the Snowden revelations, is a sense that representative democracy has failed. All are battling for their right to directly participate in determining economic priorities, choosing what happens to public space (occupy it), and influencing the content of public services. The protestors are agitating for “real” democracy, not the spectre of it we have adopted. The innovative political aspect of the protests, then, lies in the way they are expressions of a fundamental change in attitudes towards the practice of democracy itself (Hardt and Negri 2011). Both Wikileaks and the NSA revelations seek to expose the way in which elected representatives and state institutions can no longer be trusted. Today, it is no longer possible to hide the scepticism that exists towards representative democracy. It is also important to see that this decline in political trust also has an economic dimension. State reactions to the global financial crisis of 2008 demonstrated that political leaders were serving the interests of global finance and not their electorates. The implications of this should not be understated. Democratic states may have had no option but to prop up the banks with public money, but the net effect of doing so was to provide a clear signal that their representative constituency was now global capital, not the people who had elected them.

Hence, what the Arab Spring, OWS and the waves of protest express, is not a preference for one party over another, or one politician over another, but a symbolic demonstration that the representative political system and its associated capitalist economic counterpart are inadequate to address the concerns and well-being of the emerging global society (Hardt and Negri 2011). Trust in the system itself has declined. The new technology has facilitated the communication of this message, but the political dissatisfaction at the heart of the protests is the primary mechanism driving political change.

Context is also clearly important. The power of the decline in political trust communicated through social media to transform regimes, or institutions, depends on the nature of the object of critique. Obviously, the OWS movement has not (yet) brought about significant change in capitalism and if, as the Syrian example clearly shows, a repressive regime is willing to suppress dissent brutally, then the possibility of change is limited. Moreover, although social media have transformed the nature of communications in the public sphere, they have not, as yet, replaced traditional

media outlets. OWS used social media to gain the attention of the traditional media, and the traditional media used social media (in part) to keep up with the unfolding of events. In this way they enjoy a symbiotic relationship, which is evidenced by the way many major TV stations now feature tweets as parts of the narrative on the story they are reporting. Indeed, some TV news stations now have a constant rolling “ticker tape” of tweets on the screen. Twitter also became a site of public diplomacy when the Iranian President Hassan Rouhani and US Secretary of State John Kerry exchanged tweets during negotiations over the Iranian nuclear program. The mainstream media, however, whilst part of the communication mechanism, still provides elites with a powerful countervailing force with which to control the message. Here again, trust in the validity of the message is important and despite concerns surrounding media objectivity, trust in information communicated via social media is low. Information, rumours and claims, emerge on the social media, but in general, it is only when they are picked up by mainstream media outlets they become widely accepted.

In addition, the degree of Internet penetration and the ability of governments to control it, affects the mechanisms’ ability to bring about change. When Internet penetration is low it is more difficult to disseminate the message and mobilise local masses. In particular, if the mechanisms through which the state controls the Internet are powerful, then the ability of dissenters to use social media may be compromised. Yet even here, state attempts to block the Internet can backfire. In Egypt, the blocking of the Internet only seemed to further inflame the protestors (Williams 2011). Equally, in light of criticism of their collusion with the NSA, internet companies may prove to be far less compliant with government demands.

Finally, although WikiLeaks provides evidence of the ability of the Internet to be a global monitoring mechanism for state behaviour, the Snowden revelations demonstrated the other side of this coin. They revealed the paradox between the potential of the new technology to expose state and elite behaviour and, the Orwellian spectre of state surveillance of the minutest details of citizens’ communications. Moreover, the sheer scale of the data gathered demonstrated that this was a massive trawling exercise as opposed to systematically targeted intelligence gathering. The NSA disclosures also caused those states involved acute embarrassment as the extent of their spying on both friends and enemies was revealed. Of course, no one working in the field of international relations could have been surprised that states continue to spy on each other, even their friends.

3.4 Conclusion

One oft-cited criticism of OWS is that the protestors had no vision or program to advance as an alternative to what they were protesting against. Whilst at one level this is a valid criticism, at another it misses the point. To articulate such a program would require embracing the forms of representation, leadership, and acceptance of the system that they are protesting against. To paraphrase Mrs Thatcher; ‘there is

no alternative', but to protest. Although each of the protests has particular local grievances, they are also the result of widespread dissatisfaction with global politics and its financial collaborator, global capitalism. Taken together these two elements constitute neoliberalism; politics configured to serve markets not people. It is too early to declare the OWS movement a failure, and it is too early to suggest that the Arab Spring is turning into a winter. In both cases, Information Technology makes it highly unlikely that we will return to business as usual. This does not mean we can expect wholesale transformation of either the system, or individual state practices, but it would be foolish to rule it out completely.

Already we are beginning to see signs of change. The leaks continue, Assange remains beyond the reach of the most powerful state in the world, Snowden, by current estimates, has published less than 1 % of the material in his possession, and the protests continue to emerge. Already the major Internet companies are coordinating to bring pressure on state surveillance authorities and leaders in the West are going to find it more difficult to hypocritically support corrupt leaders in other parts of the world while articulating a bankrupt discourse of representative democracy that few accept today. Already, judges in the US are declaring the NSA surveillance is unconstitutional, and the White House's own review committee has recommended wholesale change in US intelligence practices. And finally, already, Information Technology is suggestive of ways in which a more direct form of democracy might emerge; through referenda and local communities organised through social media. Elections may not be replaced, but in a system where the people no longer trust the representative system itself, then other mechanisms to monitor the performance of politicians must surely emerge.

We know that the level of dissatisfaction with the political and economic system is high, and this has led to a decline in trust, not only of politicians but the system itself. We also know that the means of communicating this decline in trust have dramatically increased. There is a global sense of dissatisfaction with neoliberalism, and the new technology and social media allow that dissatisfaction to envelop us. Perhaps the biggest problem is we have no idea what to replace it with. In addition, the 1 % have a vested interest in promoting morphostasis (Archer 2015). Of course, one can point to the many examples where state and economic centres of power reimpose their control over the system. But as long as the underlying levels of trust in the system remain low, and insofar as the ability to engage in global communications continues to rise, then the mechanisms promoting change will continue to exert their effects.

References

- AfroBarometer (2013). Africa connects – Mobile phones on the rise in Africa, Internet use inching up. <http://allafrica.com/stories/201310160700.html>. Accessed 2 Dec 2013.
- Archer, M. S. (1995). *Realist social theory: The morphogenetic approach*. Cambridge: Cambridge University Press.

- Archer, M. S. (2000). *Being human: The problem of agency*. Cambridge: Cambridge University Press.
- Archer, M. S. (2015). How agency is transformed in the course of social transformation: Don't forget the double morphogenesis. In M. S. Archer (Ed.), *Generative mechanisms transforming the social order*. Dordrecht: Springer.
- Beckett, C., & Ball, J. (2012). *Wikileaks: News in the networked era*. Cambridge: Polity Press.
- Bhaskar, R. (1975). *A realist theory of science*. Leeds: Leeds Books.
- Bhaskar, R. (1979). *The possibility of naturalism*. Brighton: Harvester Press.
- Bhaskar, R. (1989). *The possibility of naturalism: A philosophical critique of contemporary human sciences* (2nd ed.). Hemel Hempstead: Harvester Wheatsheaf.
- Bhaskar, R. (1993). *Dialectic: The pulse of freedom*. London: Verso.
- Bunge, M. (1997). Mechanism and explanation. *Philosophy of the Social Sciences*, 27(4), 410–465.
- Bunge, M. (2004). How does it work? The search for explanatory mechanisms. *Philosophy of the Social Sciences*, 43(2), 182–210.
- Castells, M. (2012). *Networks of outrage and hope: Social movements in the internet age*. Cambridge: Polity.
- Chen, H. (2012). *Dark web: Exploring and data mining the dark side of the web*. London: Springer.
- Dabashi, H. (2012). *The Arab Spring: The end of postcolonialism*. London: Zed.
- Datablog (2011). Occupy protests around the world: full list visualised. <http://www.theguardian.com/news/datablog/2011/oct/17/occupy-protests-world-list-map>. Accessed 4 Dec 2013.
- Donati, P. (2015). Social mechanisms and their feedbacks: Mechanical vs relational emergence of new social formations. In M. S. Archer (Ed.), *Generative mechanisms transforming the social order*. Dordrecht: Springer.
- Elster, J. (1989). *Nuts and bolts for the social sciences*. Cambridge: Cambridge University Press.
- Friedman, M. (1966). The methodology of positive economics. In: *Essays in positive economics*. (pp. 3–16, 30–43). London: University of Chicago Press.
- Gerbaudo, P. (2012). *Tweets and the streets: Social media and contemporary activism*. London: Pluto Press.
- Gorski, P. S. (2015). Causal mechanisms: Lessons from the life sciences. In M. Archer (Ed.), *Generative mechanisms transforming late modernity*. Dordrecht: Springer.
- Greenwald, G. (2013, June 6). NSA collecting phone records of millions of Verizon customers daily. *Guardian*. Retrieved from <http://www.guardian.co.uk/world/2013/jun/06/nsa-phone-records-verizon-court-order>
- Greenwald, G., MacAskill, E., & Poitras, L. (2013, June 10). Edward Snowden: The whistleblower behind the NSA surveillance revelations. *The Guardian*. Retrieved from <http://www.theguardian.com/world/2013/jun/09/edward-snowden-nsa-whistleblower-surveillance>
- Hacking, I. (1983). *Representing and intervening: Introductory topics in the philosophy of natural science*. Cambridge: Cambridge University Press.
- Hardt, M., & Negri, A. (2011, October 11). The fight for 'real democracy' at the heart of occupy wall street. *Foreign affairs*.
- Hedström, P., & Swedberg, R. (1998). *Social mechanisms: An analytical approach to social theory*. Cambridge: Cambridge University Press.
- Hetherington, M. J. (2005). *Why trust matters: Declining political trust and the demise of American liberalism*. Princeton: Princeton University Press.
- Howard, P. N., & Hussain, M. M. (2013). *Democracy's fourth wave?: Digital media and the Arab Spring*. Oxford: Oxford University Press.
- Keane, J. (2009). *The life and death of democracy*. London: Simon & Schuster.
- King, G., Keohane, R. O., & Verba, S. (1994). *Designing social inquiry: Scientific inference in qualitative research*. Princeton: Princeton University Press.
- Lawson, T. (2015). The modern corporation as an out-of-control mechanism of social change. In M. Archer (Ed.), *Generative mechanisms transforming the social order*. Dordrecht: Springer.

- Leigh, D., & Harding, L. (2011). *WikiLeaks: Inside Julian Assange's war on secrecy*. London: Guardian.
- Little, D. (1998). *Microfoundations, method and causation: On the philosophy of the social sciences*. New Brunswick: Transaction.
- Luhmann, N. (1995). *Social systems*. Stanford: Stanford University Press.
- Machamer, P., Darden, L., & Craver, C. F. (2000). Thinking about mechanisms. *Philosophy of Science*, 67(1), 1–25.
- Mahoney, J. (2001). Beyond correlational analysis: Recent innovations in theory and method. *Sociological Forum*, 16(3), 575–593.
- Mak, T. (2011). Occupy Wall Street uses Arab Spring model. *Politico*. <http://www.politico.com/news/stories/1011/64993.html>
- Ossorio, P. G. (1997). What there is, how things are. *Journal for the Theory of Social Behaviour*, 27(2), 149–172.
- Patomaki, H. (2002). *After international relations: Critical realism and the (re)construction of world politics*. London: Routledge.
- Porpora, D. V. (1987). *The concept of social structure*. New York: Greenwood.
- Porpora, D. V. (2015). Why don't things change? The matter of morphostasis. In M. S. Archer (Ed.), *Generative mechanisms transforming the social order*. Dordrecht: Springer.
- Rawlinson, K. (2014, March 21). Turkey blocks use of Twitter after prime minister attacks social media site. *The Guardian*. Retrieved from <http://www.theguardian.com/world/2014/mar/21/turkey-blocks-twitter-prime-minister>
- Sayer, R. A. (1992). *Method in social science: A realist approach* (2nd ed.). London: Routledge.
- Shirky, C. (2008). *Here comes everybody: The power of organizing without organizations*. London: Allen Lane.
- Shirky, C. (2011, January/February). The political power of social media. *Foreign Affairs*.
- Sifry, M. L. (2011). *WikiLeaks and the age of transparency*. New Haven: Yale University Press.
- Spivak, G. C. (1996). Subaltern talk: Interview with the editors. In D. Landry & G. M. MacLean (Eds.), *The Spivak reader: Selected works of Gayatri Chakravorty Spivak*. London: Routledge.
- Stats, I. Internet world stats: Usage and population statistics. <http://www.internetworldstats.com/>. Accessed 29 Apr 2014.
- Tai, Z. (2006). *The internet in China: Cyberspace and civil society*. London: Routledge.
- Terranova, T. (2004). *Network culture: Politics for the information age*. London: Pluto Press.
- Weimann, G. (2006). *Terror on the Internet: The new arena, the new challenges*. Washington, DC: United States Institute of Peace; Bristol: University Presses Marketing [distributor].
- Williams, C. (2011, January 28). How Egypt shut down the internet. *The Telegraph*. Retrieved from <http://www.telegraph.co.uk/news/worldnews/africaandindianocean/egypt/8288163/How-Egypt-shut-down-the-internet.html>
- Ziman, J. M. (2002). *Real science: What it is, and what it means*. Cambridge: Cambridge University Press.
- Žižek, S. (2012). Trouble in paradise. *London Review of Books*, 35(14), 11–12.

Chapter 4

Social Mechanisms and Their Feedbacks: Mechanical vs Relational Emergence of New Social Formations

Pierpaolo Donati

4.1 Social Mechanisms in Aggregative and Relational Phenomena

In this paper, I intend to revisit the definitions of ‘social mechanisms’, which until quite recently have had a decidedly positivistic character, in the light of relational sociology within the ontological and epistemological framework of critical realism (Archer 1995). I shall distinguish between social ‘mechanisms’ of an aggregative type (mechanistic mechanisms) and social mechanisms of a relational type (relational mechanisms). This distinction parallels the distinction between structural and relational effects that I introduced in a previous contribution to this series (Donati 2013).

Since the term ‘social mechanism’ often has a largely positivist (mechanical) footprint, because of its aggregative and sequential character (see Gross 2009), I prefer to use the term ‘generative mechanism’ to underline the internal relational configuration that such mechanisms have in the critical realist perspective adopted in this chapter.

The challenge of identifying a generative mechanism actually working lies in the peculiar ambivalence inherent in the social order of reality. On the one hand, in the social world and under conditions of increasing pluralism (societal morphogenesis), the properties and powers of elements and relations become less and less purely reproductive, and more and more subject to considerable variability. On the other hand, these social properties and powers cannot vary in any way whatsoever if they are to produce recognizably similar outcomes. In an Open System there will be tendencies rather than regularities because contingencies will intervene, unlike in

P. Donati (✉)

Department of Sociology and Business Law, University of Bologna,
Strada Maggiore 45, 40125 Bologna, Italy
e-mail: pierpaolo.donati@unibo.it

laboratory experiments where scientists can artificially produce closure against external intrusions (that, is they can simulate Closed Systems).

Those who allow that subjective factors can vary in any way whatsoever because, after all, the ‘social mechanism’ operates mechanically (see Luhmann 1995), are not really making a sociological assertion. Of course, the statistical theory of probability assures us that when we repeat a game enough times, the distribution of results becomes stable and assumes a precise configuration. But this fact is true only on two conditions: first, that the context of the games remains unvaried; second, that subjective factors are not significant. These are two conditions that are always problematic for the sociologist, precisely because the social-historical context is always changing, and also because individuals react with different modes of reflexivity, which themselves change over time. From this arises the need for a better specification of when ‘social mechanisms’ are mechanical and when they are relational in kind.

They are mechanical when they consist in producing a collective effect that is aggregative, that is, one that derives from prior dissemination and results from the simple addition of single units (e.g. individuals): mechanisms of this type include those that disseminate an industrial product, a fashion, or a type of vacation, to each of which individuals aggregate themselves with others’ choices because of a sort of ‘non-reflexive attraction’. ‘Relational’ social mechanisms, on the other hand, are those that produce an emergent effect such that it generates a new social form with a different relationality among its elements: this is the case for social innovations in which individuals alter relations with others, but that still produce ‘regular’, meaning tendential effects.

The differences between the two types of mechanisms are connected to the fact that the interactions among the (individual) elements happen according to different modalities with respect to context, time, and agency: mechanical interactions happen in one way, relational interactions in another way. It is these ‘ways’ that we must clarify.

Let us consider, for instance, the belief-formation mechanism “which suggests that an individual’s propensity of withdrawing savings from the bank, adopting a new drug, visiting a restaurant, or joining an organisation for collective action is an increasing function of the number of other individuals who already have performed the same act” (Hedström and Swedberg 1998, p. 20). The general formulation of the belief-formation mechanism “states that the number of individuals who perform a certain act signal to others the likely value or necessity of the act, and this signal will influence other individuals’ choice of action” (ibid: 21). According to these authors, this is the mechanism that is at the heart of the self-fulfilling prophecies of Robert Merton, the network effects of James Coleman, and the bandwagon effects of Mark Granovetter¹ (Hedström and Swedberg 1998, p. 21). “On the fundamental level of

¹As more people come to believe in something, others also “hop on the bandwagon,” regardless of the underlying evidence.

mechanisms, the run on the bank, the prescription of the drug, and the emergence of the collective movement, all are analogous”. (ibid, p. 21)

The mechanism consists in the attraction for individuals of the perception that a given phenomenon has a high probability of happening and that aggregating themselves with this collective behaviour is advantageous or irresistible. Aggregation has the features of an ‘impersonal statistical phenomenon’ that does not require reference to interpersonal relations. If the latter are involved, they figure merely as a social mechanism of attraction/repulsion.

In illustration, let us take the case of the formation of inter-ethnic and inter-group social ties. It is well known that they are critical because important and intimate social ties tend to be established disproportionately between those sharing significant social attributes (that is, homophily). In the spirit of analytical sociology, Skvoretz (2013) adopts what he calls a social mechanism approach to the explanation of inbreeding homophily. He asks the question of how the phenomenon of inbreeding homophily could be generated and finds two ‘social mechanisms’ that could drive intra- and inter-group relations: *attraction* to similar people versus *repulsion* towards dissimilar others. The conclusion of his research is that “the attraction mechanism fares better than the repulsion mechanism” (ibid, pp. 506–507). What is wholly absent in this approach is the study of the structure of attraction and repulsion as social relations, and their variability not only in terms of the presence of these factors being ‘more or less’, but of the different qualities and properties of attraction/repulsion in terms of their relational dynamics.

Can we say that the way in which this generative mechanism operates is indifferent to social context, to the temporal sequence of actions, and to the mode and degree of agents/actors’ reflexivity? In my view, this generative mechanism is not independent of these factors. The outcome of the process will be ‘regular’ only under certain conditions. Behind the belief-formation mechanism there is the assumption that a process of imitation based on a stimulus-response type of mechanical feedback takes place. Mechanical devices (such as the thermostat) deal with their context through binary codes² (positive/negative feedbacks), but this is not always or usually the case for social forms (interactions, organisations, societies), which are sensitive to the context, the time-sequence of events, and the variability of agents’ modes of reflexivity. In a word, social realities are *relationally* contested and subjects react

²The word ‘code’ refers to a set of rules for converting a piece of information (for example, a word, a gesture, an action or a sign/symbol) into another form or representation (one sign/symbol into another sign/symbol), not necessarily of the same type. In communication and information processing, *encoding* is the process by which information from a source is converted into signs/symbols to be communicated. *Decoding* is the reverse process, converting these code signs/symbols back into information understandable by a receiver. A binary code 0-1, as is well known, is used in computer technology to convert any information into signs that can be processed by the machine. When I talk of an ‘instrumental code’ or a ‘capitalist code’ I mean a set of rules that convert any information on social relations respectively into signs of mere utility or of profit making. A relational code converts any information into relations, e.g. any social action/fact into social relations that, being of a relational form, is not reducible to its single components. The rules of a relational code are part of what is called ‘relational analysis’ (Donati 2011, pp. 146, 163).

relationally. The *belief-formation mechanism* described by Hedström and Swedberg depends, for its dynamics, on conditions that do not need to recognise these characteristics and which make no reference to them.

I am sympathetic to Hofkirchner (2014) when he claims that a social mechanism is ‘a special organisation’. His argument relies upon good reasons (i.e. the logic of the Third). Nevertheless, we should note that under conditions of accentuated social morphogenesis, *self-organisation* becomes more and more problematic due to an excess of contingencies and the concomitant relational contestation of the organizational form to be generated that goes with it. Without an emphasis on reflexivity (in its various modes), the paradigm of self-organization in system thinking can give an excessive tribute to the biological metaphor, which Hofkirchner himself cleverly avoids doing. As distinct from what happens in biological reality, in the social realm the networks of inter-human communications and their codifications are difficult to identify and manage. Only under very special conditions can they be detected reflexively and then be specified as (stable) expectations.

What I want to focus on is the relational structure of the causal connection “if X ... then Y” between input and output (for example, “the more a belief is disseminated, even if it is not true, the more it is actualised”). *The causality “IP (input) → RO (regular output)” involves the mediation of a relation endowed with a structure such that it generates RO.* This mediating structure is not necessarily deterministic, as mainstream theory on social mechanisms would have it.

The theory of the belief-formation mechanism states that if the number of individuals who make a choice increases, then that *causes* the propensity of other individuals to aggregate themselves with that choice and so for it to increase. This explanation makes it a matter of indifference whether individuals are driven by instrumental rationality (in that they believe that this choice is more useful than other ones and is a ‘winning’ choice, one that leads to success) or are, instead, driven by motives that are aesthetic, political, ideological, utopian, or, perhaps, expressive or evaluative, but in any case they are not instrumental – which invalidates the theories of social mechanisms based on rational choice. What I want to emphasise is that this causal explanation uses a very restrictive conception of the social relation. It uses the definition of the social relation proposed by Max Weber, who conceived of it essentially as a symbolic reference (*refero*) between agents. In Weber’s definition the relation is ‘social’ because Ego refers him/herself to the meaning Alter attributes to an action, and vice versa, but there is no reality that emerges from this reciprocal symbolic reference between individuals.

Likewise, in the belief-formation mechanism each individual is induced to do what others are doing because s/he believes in the symbol that is in play. Here the social relation is understood in a hetero-directive way as an agent depends on someone else. This approach ignores the structure of the social relation as the product of the reciprocal action between the terms that it links. The structure of an aggregative relation is not the same as that of an emergent relation. The structure of an aggregate relation has a collective reference (toward a ‘mass’ that attracts) while the structure of an emergent relation is innovative and quite complex (it is intrinsically ‘relationally reflexive’, as I shall discuss below). The regular outcome of the former (aggregation)

and the regular outcome of the latter (emergence) differ not only in the way in which they come into existence, but also in their properties and powers.

In the case of the run on a bank that is rumoured to be on the verge of failure, an aggregate relation is realised among those who believe this rumour, in which: (i) the connection among the goal, means, norms, and values of actions is supposed to be totally closed and determined, and (ii) for this reason the expected regular output (RO) is automatic (the bank is destined to fail). However, in the example of fiscal reform, things are more complex: the new tax rates are integrated as the ‘means’ into the structure of a relation that has a certain goal (the redistribution of incomes), certain rules (who pays more and who pays less), and an underlying value (an idea of justice). Every dimension of the relation can be actuated in various ways and to different degrees and, therefore, the final outcome will only show a tendency towards ‘regularity’ according to the relational structure among these dimensions. Empirically, it will remain merely tendential given that different agents could respond by (a) tax-evasion, (b) finding ‘loopholes’ in the tax law, and, (c) by migrating or claiming their principle residence is in a ‘tax haven’. I would say that this law itself is relationally contested.

In brief, my argument is that: (i) the mechanism inputs enter a social structure that generates a ‘tendency’ in outputs/outcomes; (ii) this structure is relational; (iii) which type of ‘regularity’ the output/outcome will have depends on the relationality peculiar to this structure.

To better understand the relational vs. aggregative character of social mechanisms, we can consider the mechanisms that operate in characterising the post-modern individual’s identity crisis. This crisis manifests itself in the contradictions between self-directed and hetero-directed pressures to which individuals are subjected. On the one hand, individuals are aware that systems are losing integration and, as a result, they feel that they can get ahead in life only individually (in the words of the slogan: “Systems no longer function: that’s where you go alone”). On the other hand, individuals feel hetero-directed by the effects of networks of relations, as when people join a social network on the internet or buy a product to follow a fashion trend (they experience the effect of a constraint: “As long as others are flocking to buy a new product, you have to buy it too; otherwise, you will be cut off from the world”; “As long as others are in the network, you have to be there too”). The network effect consists in individuals feeling that if they leave the network, they lose something important. Their subjective perception is that there are more advantages than disadvantages in remaining connected to others (for example, one’s ‘friends’ on Facebook), and this makes it difficult to leave the network.

Therefore: on the one hand, identities linked to systems are collapsing; on the other hand, identities are forming under the social pressure of the latest fads (with their imitative mechanisms) and of communicative networks (with their mechanisms of identification, i.e. network effects). *In all cases, what is in play is a social relation*: in the first case, the actual loss of relations that previously gave security and stability is influential (if the system collapses); in the second case, the fear of losing a social relation upon which one’s identity depends is at stake (in cases when the individual abandons the network). *The reflexive imperative arises from the contradiction* between the need to make an individual choice and the need to be in

the network: from this comes the fact that individuals find themselves confronting the necessity of developing a reflexivity that is relational by definition because it has to do with the choice of this or that behaviour in relation to that upon which the Self's identity depends. However, the responses of individuals are obviously extremely diversified because of their different modes and degrees of reflexivity. Social processes carry out the selection of the influence exercised by individuals on the basis of their different capacities and objective opportunities for responding with suitable reflexivity to the challenge of having to find a relation appropriate to themselves and their world.

The belief-formation mechanism is at work where aggregate phenomena alone are concerned. In non-aggregative phenomena, a mechanism that I would like to call the relation-formation mechanism is at work. I shall attempt to explain in what it consists.

When the system loses its directive distinction (its guiding principle) because some elements and/or their feedbacks have changed, the generative mechanism (i.e. the relation between events that is structured as the cause of the results) changes so that another form emerges. This means that *we have to look at the structure of the relation between events that is the cause of the outcomes*. Obviously, as Archer (2013) points out, the realist generative mechanisms do not operate at the level of events but at the 'real' and unobservable level of the factors (structure, agency, culture) working together in that relation.

Here is where we need to introduce the distinction between mechanical social mechanisms and non-mechanical generative mechanisms. Mechanical social mechanisms are forms of self-organisation based on an interplay of positive and negative feedbacks and generally imply a deterministic process. For example, when an epidemiologist observes that certain types of insects bite women much more often than men, then s/he has to look for the factors that make women's skin more attractive to insects than men's skin (Hedström 2005). Since we can reasonably suppose that women do not have special social relations with insects, the mechanisms will probably be mechanical. Non-mechanical generative mechanisms are based on another kind of causal process that entails the dynamics of a social structure with feedbacks of different orders among the elements and their relations. As I shall specify, there are first order feedbacks (positive and negative) on individual actions and second order feedbacks (positive and negative) on social relations.

I argue that mechanisms are 'social' in so far as the elements/entities give feedback on each other, not only by allowing variability or thwarting it (i.e. playing out positive or negative feedbacks), but also by performing more complex operations based on what I call 'relational feedbacks' (as defined in the next section). These are feedbacks that change the relationality of the structure (or network) that operates as a generative mechanism.

From an epistemological point of view, the initial theory of social mechanisms was conceived by making reference to a version of physical mechanics of a Newtonian type with its laws of 'attraction': the elements of social mechanisms (that is, individuals) are 'attracted' by a mass in proportion to the size of the mass. A clear example is provided by the snowball effect. This (Newtonian)

mechanics is valid within the limits of the theory of relativity, but is it appropriate to the social order?

If, we consider social phenomena in conditions of intensified social morphogenesis (Archer 2013), as is happening today in the more modernised and globalised countries, we see that the parameters of context, time, and agency change, both for the reality under observation and for the system of observation. Generative mechanisms become more relational in that the causality observed and the real causality are closer to quantum mechanics and the theory of relativity than to classical Newtonian mechanics. As a matter of fact, the phenomena of self-fulfilling prophecies and bandwagon effects decrease in frequency the more social morphogenesis becomes rapid and accentuated so that, at the empirical level, the generative mechanisms show properties such as resilience, elasticity, instability, and interplay between the constituent levels of reality that depend on their external as well as internal relationality.

4.2 How Social Mechanisms Are Constituted

According to the Morphostatic/Morphogenetic paradigm, in my understanding, the emergent phenomenon originates from the intermediate time/space between downward causation (contextual conditioning) and upward causation (agential responses) which are empirically distinct and temporally sequential (as has been made very clear by Archer 1979, 1995). Communication has meaning within a relational context that is not holistic in nature but, rather, has to do with networks. Structural elaboration arises from a process of morphogenesis that follows precise temporal phases. It begins in phase T2–T3 and emerges at time T4 with a form based on the relations between the agents in the interactive network during phase T2–T3.

Doug Porpora (2015) examines the contemporary capitalist society and asks the question: why do things stay the same? My provisional response is: because the capitalist system is an immune system with respect to primary and secondary social relations generated in the T2–T3 phase. It is a highly differentiating system immunized against life-world social relations. What does this mean? It means that, given a capitalist societal structure, in the phase T2–T3 of the Morphogenetic/Morphostatic process, social interactions are treated in such a way as to free people not only from formal constraints (necessary to establish a free market), but also from any possible emergent social relation which can challenge the societal structure. The latter are denied in their molecular structure and treated according to an instrumental code (the molecular structure of capitalism itself) instead of being recognized and *enacted*, thus realizing their own potentiality (enactment results because people are conscious of relationships). Therefore, morphogenesis predominates (and not morphostasis), but its form is (re)produced within the same capitalist code of competition.

What gives it this immunity? The immunization against interpersonal and communitarian relations stems from the Hobbesian constitution of Western modern

society, that was born based upon the denial of the original community of humankind and a wholly negative, even catastrophic, interpretation of the principle of sharing. This vision has justified a socio-political order – the Leviathan – that should ensure individuals the freedoms to compete for individual success within a societal context founded on the emptying of all the interpersonal and communitarian relations external to the vertical relation between the individual and the State. The same holds true when, after Rousseau, a similar vision was applied not to the individual but to the whole collectivity. All the responses that, during the modern era, have been given to the so-called ‘Hobbesian problem of order’ – in decisionist, functionalist or systemic forms (for instance Parsons’ theory) – are an attempt to reduce the potential dangers of the presupposed original deficit in sociability of the animal-man through the building of social institutions devoted to protecting the individual against the potentially destructive competition of his fellow men. What is destroyed – being crushed by the overlap between the individual and the collective – is the social relation itself, that is canceled in the first case by the absolute separation between individuals, and in the second case by their merger into a single collective entity closed in itself.

If the relations in phase T2–T3 are to generate an emergent effect, they should have the following characteristics: (1) they must be the expression of agents who free themselves from one or more constraining factors (often these are ascriptive factors) required by the conditioning structure in which they begin to act, which is to say that there must be *an opening of contingencies* (opportunities that are different from those called for by the conditioning structure); (2) agents/actors’ actions, which are the elements that go into constituting the relations from which a form emerges, must be *compatible* with one another (the problem of selection); (3) the same actions must have a sufficient level of reciprocal attraction (energy) so that they can *combine together*, which happens if the agents/actors’ actions in phase T2–T3 target the *constitution of a certain relationality between two or more of them* in that only through that particular relation can they obtain what they desire, where such a relation can arise only from the agents/actors involved, but does not belong to any of them considered individually (this is the enigma of the relation); (4) the emergent relation (which is sought as a relational good but can reveal itself to be a relational evil) must have *its own* (specific) *principle of operation* that ensures its autonomy and stability,³ at least for a certain length of time. From the point of view of relational sociology, the generative mechanism of structural elaboration consists of these prerequisites.

Relational feedback is feedback (FB) through which agents operate *on the variety and variability of forms, states, or conditions of their relation* (R), and not on agents’ single actions and performances. The concepts generally used of ‘variety’

³The social relation’s structure that generates the emergent social form endowed with its own autonomy and stability corresponds to what I have called the relation’s ‘social molecule’, which, in accordance with the SAC (structure, agency, culture) requirement suggested by Archer (2013: 4), confers on the emergent form properties and causal powers of its own with respect to those of acting subjects (Donati 2014, pp. 153–159).

and ‘variability’ arose from a statistical and system matrix in the field of cybernetics. Their use in the analysis of social phenomena, which are not physical systems, has limitations, or rather, requires a suitable interpretation.⁴ In this setting, I propose to redefine the concepts of variety and variability from the point of view of relational sociology.

If we assume that a type of social relation (or relational system) is equal to a set (of elements) within the whole world of possible relations, *variety* is definable as homogenous subsets of modes of existence of that relation (or relational system). For example, capitalism is a relational system that has different modalities of existing as a homogenous subset: it can take different forms, for instance, American capitalism, Soviet capitalism, German capitalism, Chinese capitalism, etc. Each subset is characterised by a specific series of features (on all levels of analysis) that differentiates it from other subsets. Each subset of the same type of relations shows a regular association with a particular type of geographical, social, functional, (etc.) conditioning. For example, (a) with reference to single relations: the (medical) therapeutic relation, the parent-child relation, the seller-buyer relation, etc., which vary with a certain regularity within different cultures; (b) with reference to relational systems: the democratic political system and its various models, the company and its various models, the school and its various models, the family and its various models, etc. The fact that the same type of social relation (or relational system) can be subdivided into several varieties takes the name of *variability*. By variability or variation we mean the property of relations (or relational systems) of being stratified within themselves: the theoretical recognition of this prerogative is one of the contributions of critical realist relational sociology and, more generally, of the sociology of variation; the opposite principle of homogeneity (or monolithism) is instead a corollary of structuralist or holistic approaches in general.

For relational sociology, relational feedback is the operator of relation R’s evolving through the reciprocal ‘adaptation’ of agents, which comes about when they react not to the singular behaviour of others (in conformity, or not, with the meaning of others’ single actions, as Max Weber asserts), but when they act on states (or conditions) of the relation: that is, they act on the relation itself as a reality that co-implicates them in one way or another, for good or evil. The agents can reproduce or alter the relation R. They can stabilise it or render it even more unstable. In any case,

⁴I will not discuss here, for reasons of space limits, the importance of interpretation in the analysis of generative mechanisms. According to relational sociology, culture is a basic factor in giving the process its generative character, and therefore I agree with Gross (2009, p. 369) when he claims that “the study of social mechanisms must be undertaken alongside a project of cultural interpretation” in an anti-positivist mode. But, in my approach, the cultural interpretation does not apply only to individual actions (how actors interpret the problem situation, their habits of cognition and action, the responses) – as is maintained in the Weberian tradition. It applies also (and most importantly) to the social relations as such (with their own structure) (Donati 2014, pp. 151–159). That is why I argue that a generative mechanism is not a mere ‘chain’ – aggregation or sequence of the relations Actions-Problems-Habits-Responses (see Gross 2009, pp. 368–69) – but a social configuration deriving from reflexive relationality.

relational feedback is feedback that generates *other* relations (which can be morphostatic or morphogenetic).

This definition of relational feedback applies also to a social network of agents (nodes) when the referent is the *we-relation* of the network. For example, when primary agents under capitalism become corporate agents through unionisation; what they share is a common feedback to the same capitalist relation that exists between each worker and the employer by transforming their single vertical relationships into a horizontal associative relation which generates a new (corporate) network. In other words, each worker changes his/her vertical relation by introducing an intermediary social formation (the union) that acts as a new node in the relational organization of a company, so that, by spreading among many firms, this relational feedback can change the industrial relations of a country.

One should keep in mind that a relation can maintain its form while the variability of its states increases (variation of the same entity, i.e. within the same relation). For example, a couple relation or a friendship relation can encounter moments of effervescence or coolness, moments of greater or lesser openness (variations of 'states') and yet remain the same type of relation (as a couple or as friends). Another instructive example of the relational form's invariance in conditions of greater variability is that of fashion as a social relation. Empirical research shows that the more the variability of fashion products increases, the more the relation that ties an individual (or a set of individuals) to behaviours connected to fashion is reinforced: i.e. the social bond within the group who belong is reinforced. On the other hand, if the variability of fashion products decreases, the probability that an individual will quit belonging to this social reference group increases (the individual can change groups or decide to suspend his/her relations inspired by a fashion-related goal).

In brief, the increase of variability of a relation R's states is compatible with the maintenance of that relation, and it is not necessarily the case that decreasing variability leads to conserving the relation intact; on the contrary, the opposite is more probable. The field of family relations provides a wealth of examples: family relations that are more morphostatic, as variability is kept in check by negative feedbacks, are more subject to crises and possible breakdowns.

If, in place of the concept of system (Buckley 1967), we focus on that of social relations, then relational feedback can be defined as the feedback pursuing the opportunities (goods and/or evils) of the relationship between different varieties, within the context of (and in view of) the broader network's relational opportunities (goods and/or evils) (Donati 2013).

Relational feedback is thus second order feedback that operates on the relation between first order feedbacks (both positive and negative feedbacks, which are simple reactions constituted by unit acts). Because of this quality of relational feedback (with its own causal properties and powers), it is the mechanism that can put social integration and system integration in synergy with each other, which otherwise would go their separate ways (I shall return to this theme in Sect. 4.5).⁵

⁵In my relational approach, relational feedback takes the place of what Luhmann calls 'the autocatalytic factor' as the solution to the problem of double contingency (Luhmann 1995, p. 120). As Vanderstraeten (2002: 87) reminds us: "Following Luhmann, social systems use double contingency as stimulus for the restructuring or reconditioning of their own processes (...)

If ‘variety’ indicates the tally of the total number of a relation’s states (for example, an individual’s trust in a political party) or of a relational system (for example, a family structure), the condition for that relation’s or relational system’s remaining in a state of dynamic stability under conditions of perturbation is described as the law of requisite variety (Ashby 1958). The statement, “*Only variety can destroy variety*” (Ashby 1956, p. 207) means that, when faced with perturbations, the relation or relational system must be able to access a variety of relational states. Therefore, if a relation is to have a (dynamic) stability, *the number of states of its control mechanisms must be greater than or equal to the number of states in the relation that must be controlled*.

For example, let us consider the division of labour in a couple with respect to both the internal and external relations of a family organization. If the couple relationship is to have a dynamic stability, the balance of the internal and external tasks performed respectively by the two partners should rely upon their ability to change their relational feedbacks (control mechanisms) in such a way as to modify their individual tasks according to the changes in these relations. Of course, there are many external (as well as internal) conditions under which the number of the relational feedbacks can be accessible to the partners depending on the structure and dynamics of the couple and the social network where the couple finds itself.⁶

I ask: can we infer from this assertion that in the field of social relations disorder can be eliminated only by more disorder? I answer in the affirmative, but with a caveat: disorder (i.e. the departure or deflection from a given social order due to imbalances or disagreements about the relational feedbacks on it), which can eliminate the fracture of that prior order, is not equivalent to chaos, but to processes creating new opportunities (i.e. possible varieties). Luhmann says: the increase in the environment’s complexity is a challenge for the system that the system can control only by increasing its own complexity. In my view, this statement must be interpreted in the sense of a relational reconfiguration of the system. The reduction of contingencies can happen if the system increases the variety and variability of its possible relational configurations, including potential new elements. *The social mechanisms able to control increases in complexity are new relational configurations* in which the causal relation is a specific relational feedback that is different in its dependence on the mode of reflexivity that it incorporates.⁷

Thus the problem of double contingency has the properties of an autocatalytic factor: without itself being ‘consumed’, it enables the construction of structures on a new level of ordering, which is regulated by that perspective on perspectives. Thereby – and this is why one can speak of ‘auto’-catalysis – the problem of double contingency is itself a component of the system that it forms. The experience of contingency gives rise to the formation of a social system, but this experience depends itself on the generation of meaningful issues in the social system. Seen in this light, research about the very origins of social order loses its relevance. In respect to this perspective, my relational approach avoids Luhmann’s mechanistic (anti-humanist) determinism in that the catalytic factor is traced back to human agency in connection with a social structure and a culture.

⁶For more details see figure 4 in Donati (2013).

⁷For the different dominant modes of reflexivity, see Archer (2003) and the further insights in Archer (2010).

I offer two examples: markets and families. Economic markets are increasing their variety and variability: new capitalistic markets are emerging, but also social markets, non-profit markets, markets called 'local exchange trade systems' (Lets), markets based on traditional bartering or based on new forms of social reciprocity (such as time banks). In parallel fashion, family forms of various types are increasing in late modernity. If the economic system or the system of families must incorporate new complexities if they are not to collapse, they must be able to access new relational configurations. How do they do this?

The 'law' stating that only variety can avoid the disorder that follows the appearance of new contingencies (i.e. varieties induced from inside or outside the system) indicates that a relation or a relational system can reorganise its variety on condition that it has adequate mechanisms for reducing contingencies. These mechanisms give it another configuration, and it remains to be seen whether its form was altered or not, and in what way. For example, a couple with only one breadwinner can become a symmetrical, two-career couple (bound morphogenesis), or a monogamous couple can become a polyamorous couple (open to sexual relations with other partners by mutual consent of the partners themselves), in which case we have an unbound morphogenesis.

The thesis that I intend to advance in this contribution is that *the control of variety by means of greater variety can be effective – for the purposes of realising a dynamic stability of the relation or relational system (which I call 'steered morphogenesis') – only on condition that relational feedbacks are at work. This is because – unlike behaviour in physical systems – in social systems the inter-play of positive and negative feedbacks is not enough to achieve a dynamic stability.* For example, market actors do not differentiate themselves by separating from one another based on their own functional specialisation; rather, although they are able to specialise and to have their own functional identity, they connect themselves to other economic actors in order to create mixes of for-profit and non-profit enterprises or various types of partnerships among public, private, and mixed entities. Something analogous happens in the area of family forms where new family structures do not separate functionally but, rather, alter their form, maintaining, however, the type that characterises the family relations (with their own qualities and causal powers).

I clarify below how relational feedbacks operate; they consist in activating relational reflexivity (i.e. reflexivity on the relation – for example, on friendship or fashion – not on singular behaviour or single actions) between varieties (different states of a relation or of a system such as the market or a family) on the part of social agents/actors.

Ashby does not speak of the directionality of systems (what I call here relational steering), but limits himself to describing the controlled evolution of a system that operates (functions) in a stable way through the increase of mechanisms controlling new opportunities (varieties of the system's states). Luhmann (1997) believes that stabilisation – understood as *steering* – is highly improbable, if not impossible. My

thesis is that steering is possible on condition that positive and negative feedbacks are managed by relational feedbacks.⁸

4.3 How Relational Feedbacks Work

On an elementary level, relational feedback operates on the relation R that results from positive and negative feedbacks between the single actions of Ego and Alter. The causal power of relational feedback is that of reorganising agents in a different configuration of relationship. In order to understand how this can happen, it is necessary to see feedback not as an automatic mechanism of a binary type (as in a thermostat), but as a relation that can be steered by a many-valued and transjunctive logic.⁹ Reacting to a we-relation (the initial R, and then the subsequent R_n when those involved continue to orient themselves towards the ‘we’ in question) can happen in different modes that are not a ‘calculus’ or a ‘melange’ of different possible choices, but a *restructuring of the previous we-relation*, by changing, for example, their mutual expectations or any of the elements and relations that form the structure of that we-relation (Donati 2014). Relational feedback is a second order, non-automatic, generative mechanism that operates on a previous we-relation. Since a relation is a set,¹⁰ then a ‘second order’ relation means the effect of

⁸Among their other effects, positive and negative feedbacks answer a need for *control* (which is Ashby’s problem) while relational feedbacks answer a need to solve participants’ problems by achieving a *satisfactory state* of their relation, which should help single agents reach their objectives. Obviously, the satisfactory state can be more or less stable, but it is necessarily dynamic. In other words, relational feedbacks are retroactions aimed at goal-attainment, which consists in a relational configuration able to regulate the system’s state, not simply in order to control its stability, but to increase its capacity for being more satisfying for those who participate in it.

⁹A *many-valued logic* (also multi- or multiple-valued logic) is a propositional calculus in which there are more than two truth values, without violating the principle of non-contradiction. In Aristotle’s logical calculus, there are only two possible values (i.e. “true” and “false”) for any proposition. In cases where a value is neither true nor false, an extension to classical two-valued logic is an *n-valued logic* where *n* is greater than 2. Those most popular in the literature are three-valued (which accept the values “true,” “false,” and “unknown”), the finite-valued with more than three values, and the infinite-valued, such as fuzzy logic and probability logic. A *transjunctive logic* is a logic based on the operation of transjunction, which consists in refusing a given dualistic structure of proffered choices (i.e. the choice between yes and no, left and right, 0/1, etc.) and going beyond the conjunction/disjunction alternatives; it *transcends* (not necessarily in the Hegelian form of sublation) the given objective two-valued system (for instance lib/lab). It is a relational pattern which requires that more than two values be filled in (because it does not remain within the framework of acceptance/rejection of the given opposite values and their combinations).

¹⁰In mathematics, a (binary) *relation* R between sets X and Y is a subset of $X \times Y$. Thus, a relation is a set of pairs. The interpretation of this subset is that it contains all the pairs for which the relation is true. We write xRy if the relation is true for *x* and *y* (equivalently, if $(x, y) \in R$). X and Y can be the same set, in which case the relation is said to be “on” rather than “between”.

a set of pairs (a relation) on the same or a different set of pairs (a relation), and therefore cannot be described only in terms of positive and negative feedbacks confined to ‘one shot-acts’ (this remains as one possibility among many). That is why, in general, a relation operating on another relation cannot be restricted to accepting or refusing the first order relation alone.

Of course, in this case the relational feedback is positive, since it (the decision) changes the previous state of affairs. But the point is that the decision is made on a set (A) of relations (between the elements to be combined) that receives a relational feedback in so far as the agents/actors react to the previous relationality not simply by accepting or refusing the whole set, but proposing a new set (B) of relations, that are partly identical and partly different from the initial relations in set A. The new configuration changes the generative mechanisms that the newborn set implies. In short, what characterizes a relational feedback is the fact that, besides operating *on* a different referent (set of relations) in respect to the first order feedbacks, its logic works *through* relations, and therefore builds a new relationality among the elements in play.

The relational logic is about the form that any relation holds as a matter of fact if it has to designate or achieve a (common) goal between two (or more) agents. It shows how the configuration of the agents’ reciprocal actions goes on (i.e. it shows the normativity that rules both the relational configuration proposed by the agents and one emergent), and therefore the structure of the emergent relationality, its elements, its identity, the different modes of attribution of such identity, its different possibilities, and its consequences. In short, the relational logic is a combinatory logic. It is the way to connect ‘regularly’ the elements of a set (conceived as a network of relations) irrespective of the target/referent desired by the single agents. It is a logic different from the linear one (Yes/No, Aut/Aut, improperly called *dialectic*), because it is based upon interaction and contradictory complementarity between two opposite realities (for this reason it is called *antidialectic*), and therefore accepts the paradoxes as a matter of fact, rather than excluding them as ‘illogical’.

The term ‘contradictory complementarity’ means a complementarity between opposites. With quantum theory, modern science has gone beyond the Aristotelian logic based upon the principle of the excluded middle (*Tertium non datur*, or binary logic) towards a logic which includes a third possibility between two opposites, through the adoption of a relational ontology and epistemology. The principle of non-contradiction is not erased, but is limited to the ground of non-complex phenomena (we could say: the first order feedbacks). For complex phenomena it is necessary to resort to another principle, namely the principle of ‘contradictory complementarity’. Two opposite representations of the same reality can co-exist *at the same time*, by virtue of the relational character of reality. A feedback can maintain a sort of complementarity between its negative and positive dimensions (‘I accept and do not accept at the same time’, referring of course to different objects: I accept the relationship but not the proposed solution). This apparently leads to paradoxes, and, in fact, one speaks of fuzzy logic or logic of paradoxes. Examples can be: in physics, the coexistence of particle and wave; in sociology, liberty and equality,

being free and formed, being black and white, having opposite attractions, etc. Briefly, this principle refers to all cases where oppositions belong together as complementary without forming a whole.¹¹

The very structure of the concept of polarity is relational. Let us ask ourselves: what is the shared feature in all the various forms of opposition (for instance between a positive and negative feedback)? That question was avoided by Aristotle, whose logic focused on the conditions that separate opposites. Now, modern science has explored the factor that links opposites and reveals the emergence of the third: this is their ‘complementary relationality’. Such reality cannot unfortunately be examined using the tools of Aristotelian logic and is indeed paradoxical from the point of view of classical logic. If we say that ‘the contraries are the life of one another’ (as happens in many social relations, e.g. master and servant), or if we say that ‘each polarity can only exist in the other’,¹² we are referring to a type of complementary relationship, one which does not relate to the mystical idea that opposites are the same thing or can be conflated. On the contrary, in a relational feedback, *every polarity, although it cannot exist without the other, remains only and always itself*.¹³ The polar relationship (or complementary contradiction) consists *simultaneously of a related exclusion and inclusion*. This is the source of the paradoxical nature of those kinds of feedbacks that are inherently relational.

In culture, for instance, the polar structure of meaning is organized in such a way that each existing meaning is elaborated on the basis of the relation between two opposites (for instance the symbols of peace and war). In other words, any meaning would seem to be the relational product of two polar terms that are indispensable precisely because one is essential to the other.¹⁴ The advantage that the human species gains from an organization of meaning that is relational consists in enabling the person (the relational subject) to widen her ability to generate new possible horizons. It happens in much the same way as the increase in information from three-dimensional instead of monocular or binocular vision: new dimensions open up. Switching from a ‘yes/no logic’ to a ‘relational logic’ might well produce huge paradoxes, but this is what we experience daily in social phenomena. Indeed, they cannot be denied.

¹¹To explain why the relational subject experiencing a complementary contradiction does not need a reference to a whole in order to exist, let us quote Needham: “... it is a truism that the opposition right/left [or, for our own purposes in this text, Ego/Alter] cannot be defined in itself: the terms can be defined only in relation to something else. But it is not true that they can be defined only in relation to something that constitutes a whole. The arbitrary stipulation of a point of reference, combined with a given point of observation, is perfectly sufficient. The point of reference could be a map reference in a featureless desert, or the beam of a flashlight in a dark enclosure, or coordinates in space. In each instance, once the point of reference was established, the observer, at the given point of observation, could determine right and left, and without reliance on anything that could be called a whole” (Needham 1987, p. 25).

¹²This formula refers to the notion of ‘polar opposition’ elaborated by Romano Guardini (1925).

¹³Guardini, *Ibid*.

¹⁴Ugazio (2013).

In illustration, let us take the mechanisms by which a social network can operate. Empirical research shows that a social network is more effective in taking decisions when it decreases the number of brokers, while is more effective in disseminating information or adopting a certain practice when it increases the number of brokers.¹⁵ In the case where a network has to decide whether it wants to pursue more efficacy in decision-making or more widespread participation, what is at stake is the kind of relationality that links the nodes. The network as such is not a ‘subject’, but the single members will behave in such a way as to refer to a we-relation which has to produce one or the other of these results. They decide about how to manage the black holes with more or less brokers. To say that a network resorts to a relational feedback means that the nodes (participants) make a choice between different configurations (less or more brokers), depending upon their preferences. This is where the fuzzy logic of relationality comes in. The network dynamics and its final outcome (managing the network more efficiently *or* disseminating some information/initiative/practice, in every cycle) is not deducible from the ‘yes or no’ feedbacks of the single members of the network, nor from the single choices ‘yes or no’ to having a certain number of brokers (I want more or less), but from the number of brokers that have actually emerged and from the ways they have related themselves to the participants. Feedbacks based upon ‘complementary contradictions’ can be one of these ways. The outcome, of course, is not a matter of rational choice. Many different arrangements can be produced by the social network, depending on the kind of relationality (and the kind of its reflexivity) that the participants employ *de facto*.

Gorski (2009, pp. 160–162) defines social mechanisms “as emergent causal powers of related entities within a system,” where ‘related entities’ are defined as “entities and relationships that are necessary to the recurring effects of the mechanism in question.” I agree, provided that we make explicit that, by saying that the social mechanism is based upon recurrent effects, we do not mean that it is run by a combination of positive and negative feedbacks alone. To my mind, ‘recurrence’ means that such a mechanism is based on second order relations (i.e. relational feedbacks) that are able to manage (control) the outcomes of the first order relations so to generate the same result, but not necessarily by maintaining the same relational structure producing that result. The feedback can be a different way to relate the elements and relations internal to the structure. In sum, my argument is that the recurrent effect can be the outcome of a different relational configuration within the black box (which is the relational feedback). We can know the inputs of the black box (for example the considerations that are being weighed by the two sides in a dispute ‘out in the open’ between two contracting parties), but how these inputs will interact and produce an outcome is ‘obscure’ because the outcome depends on the generative mechanism working inside the box, which is not trivial

¹⁵ Burt (2005), Ahuja (2000), and Fleming et al. (2007).

and not directly observable (in sociology, we can observe the outcome, not how it has emerged).

For instance, the Hobbesian form of the modern state has been since its inception the ‘recurrent result’ of different kinds of political regimes (i.e. different relational configurations with their respective supporting interest groups, social strata, political parties, movements, etc.) that have embodied what I call the lib/lab order in many different versions (variations produced by the same mechanism). As a matter of fact, Western countries (in North America and Europe), although differing from each other in many ways, still produce the same ‘recurrent results’ (failures of the market or of the state) because they are run by the same mechanism (the lib/lab configuration): their differences lie in the fact that, at different moments, they experience the shortcomings of the market *or* of the state respectively, and react by resorting to relational feedbacks that vary depending on their peculiar contextual situations.

To understand how relational feedback operates, let us consider the sequence of Ego-Alter interactions (see Fig. 4.1). The key point of the argument is that the reactions (feedbacks) to single actions of Ego and Alter and the reactions to the relation between them are different orders of reality. It is possible that Ego refuses (or accepts) an action of Alter and accepts (or refuses) the relationship with her/him, and vice versa, if and only if the feedback exercised towards the single action is of a different order of reality in respect to the feedback played out towards the reciprocal relationship. The different order of reality implies a different logic.¹⁶

The sequence of the interactions between Ego and Alter begins with Ego’s action towards Alter (Aego), to which Alter responds with a feedback that can be positive or negative (FBalter = feedback of Alter to Ego). In giving his/her feedback to Alter, Ego can act in two ways that are different and have different causal powers: (a) Ego can use his/her (personal) inner reflexivity (*I-mode*) and continue the transaction at the individual level of exchange (negotiation) based on the requests, expectations, opinions, of his/her own Self, or (b) Ego can exercise his/her reflexivity on the emerging relation R (*We-mode*) and propose a reconfiguration of this relation (R) in terms of its structure. Let us look at the two alternatives that Ego is faced with vis-à-vis Alter.

- (a) If Ego responds to Alter’s feedback with *personal* reflexivity (as an individual: by inner conversation alone), s/he has four possibilities:
- If the FBalter (= feedback of Alter to Ego) is negative, Ego can accept it, and then there is a stabilisation of the existing relation (unaltered state of the relation);

¹⁶As I have repeatedly claimed in this text, properly speaking ‘logic’, in its classical (Aristotelian) sense, is the set of rules (normativity) used to achieve valid knowledge. By extension, I understand logic as the set of rules that connect – in various ways – the components of any social relation (its goal, means, value-pattern). Knowledge is a particular social relation, one that connects the knower with the object to be known.

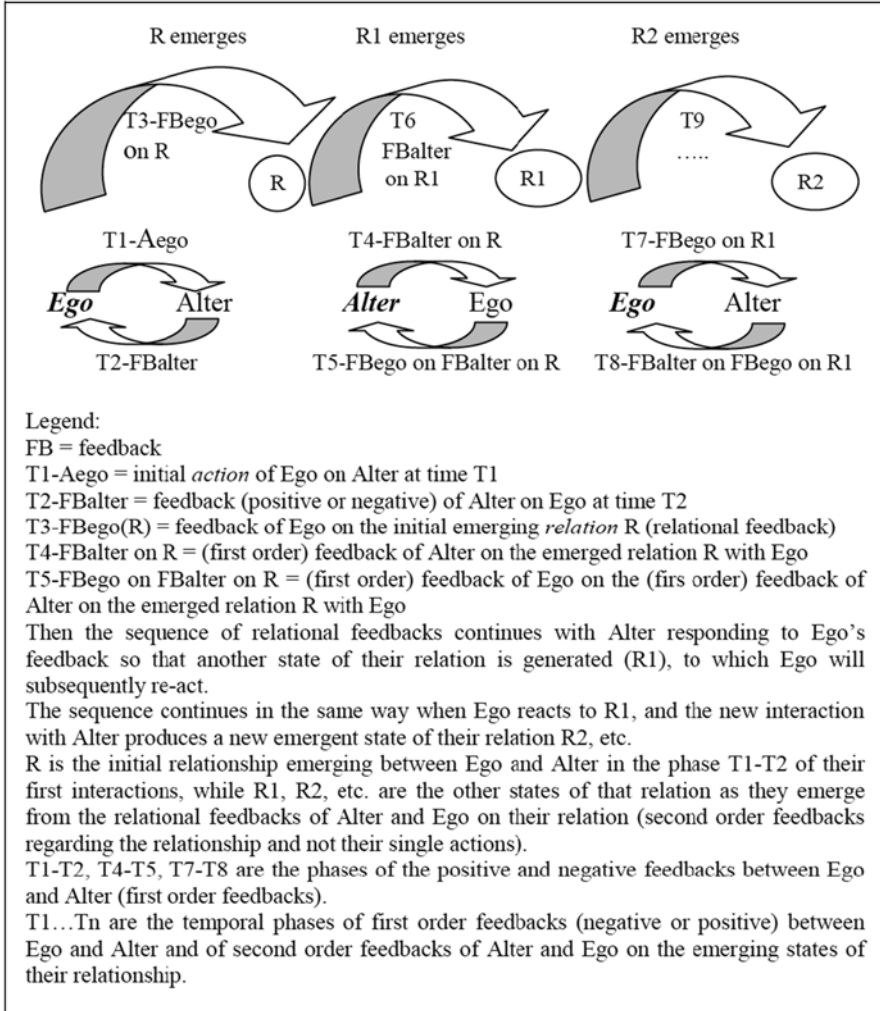


Fig. 4.1 The sequences (or cycles) of relational feedbacks

- If the FBalter (= feedback of Alter to Ego) is negative, Ego can reject it and open up another possibility (change of or deviation from the existing relation, which Alter can accept or reject);
- if the FBalter (= feedback of Alter to Ego) is positive, Ego can accept it, and then two possibilities ensue: the variation is stabilised or is further amplified;
- if the FBalter (= feedback of Alter to Ego) is positive, Ego can reject it, and then there is a restriction of varieties (opportunities) in the states of relation R.

So far, the relation R is a transaction between Ego and Alter. Now, what I want to emphasise is the fact that social relationality is different from transactionality because although it belongs to an order of reality that arises from transactions, it acquires an autonomous value (it is superfunctional and emergent with respect to transactions, although it stems from them): it is a “Third” beyond Ego’s and Alter’s trans-actions.

- (b) If Ego (more generally: Agent1) takes into account the relation’s state (the state of R as a Third) and gives his/her feedback on the created relation with Alter (more generally Agent2) [FBego(R) = feedback of Ego to the emergent relation R], then there are different possibilities with their related consequences of morphostasis/morphogenesis, depending on the kind of feedback that Alter will choose in order to reconfigure the relation R with Ego (i.e. the next state of the relation as R1).

Alter’s response to Ego has two modalities, as do those of Ego: that is, Alter can respond with his/her personal (inner) reflexivity or with relational reflexivity; in the first case Alter reduces the relation to a transaction; in the second case it is up to Ego to respond in terms of individual or relational feedback; if Ego responds with a relational feedback, then Alter proposes a new state of the relation R1 to Ego [FBalter(R1) = feedback of Alter on the new state of the relation R1].

It seems clear to me that, in order to produce relational goods, both Ego and Alter will continuously reiterate the choice of relational feedbacks.

In sum, there are four different ways in which the relation (Ri at different stages) can emerge (depending on the double contingency of Ego-Agent1’s and Alter-Agent2’s choices): (I) the morphostasis of the relation, (II) the opening of variation in the relation, (III) the emergence of a conflictual relation, (IV) the emergence of a morphogenetic relation (whether it is bound or unbound depends on successive cycles of the sequence).

- I. If the action of Ego on Alter (Aego) is one of conformity with the given relation (*routine*), and Alter’s feedback on the relation with Ego (FBalter) confirms the given relation (being negative, it prevents variations), one has a morphostatic relation (the relation’s state is reproductive).
- II. If the action of Ego on Alter (Aego) is one of conformity with the given relation (*routine*), but Alter’s feedback on the relation with Ego (FBalter) is positive, one has a proposal to open the relation to a new state (since the relation is called into question in view of other opportunities, there is a challenge to vary the relation).
- III. If the action of Ego on Alter (Aego) is a deviation from the given relation (a proposal for variation), and Alter’s feedback on the relation with Ego (FBalter) is negative, one has a conflictual relation (Alter goes against, or calls into question, the opening of new possibilities on the part of Ego).
- IV. If the action of Ego on Alter (Aego) is one of changing the given relation (proposal for variation), and Alter’s feedback on the relation with Ego (FBalter) is positive, one has a morphogenesis of the relation, which can be more or less bound to a certain guiding direction.

This same process holds true for the next steps (transitions of the relation R) when Ego will respond to Alter's proposal to configure their relation as R1, then Alter will respond to Ego's proposal to configure their relation as R2, etc.

The relational feedbacks are different from the simple positive and negative feedbacks – 'agree'/'disagree' – because they not only change their referent (the relation R instead of an individual agent's act/feedback) being positive or negative, but because they work according to a relational code instead of a simple positive/negative code. In other words, the agents react by adopting a feedback that combines different possibilities relationally, whereas this combination cannot be reduced to a mere acceptance or refusal of a previous action or relation. The reaction to the emergent *we*-relation Rn does not merely accept or reject the emergent, but redefines it. This is what changes the process through the relational feedbacks.

In illustration, it is true that, if a political party does badly in an election, it sensibly changes its programme for the next election. Voters then vote for or against. This shows that, as Archer (2003) rightly points out, human agents being conscious enables them to be reflexive about emergent goods/evils (our party's failure last time), which makes them different from mechanical thermostats. When I say that this process is guided by relational feedbacks, what I want to underline is the fact that the new program is the result of many negotiations within the political party in question, and perhaps also in relation to other political parties. The voters' feedbacks are of a different logical kind in so far as they do not accept the simple logic yes/no, acceptance or refusal of a new programme, but, before voting, they try to change the relational context of the decisions to be made. They react to the first order proposals (set A of relations) by proposing second order relations (set B of relations) which represent the products of relational feedbacks which, in their turn, of course require a 'yes/no' response in the final vote. The latter move brings back the relations to the first order.

The sequence (or cycles) of relational feedbacks continues for the time during which the relation lasts, according to the dynamic just illustrated. The relation is configured and reconfigured in states R1, R2, etc. When an outcome of unbound morphogenesis prevails, the relation changes type, and not just in its variable 'states'.

The argument about relational feedback as a generative mechanism regulating the Ego-Alter relation also holds true for groups or associations of people. As an example, let us consider N agents who meet to form an organised social network. The shared goal is to create a working group, a research team, a voluntary association, a mutual support group, etc. When the N agents interact with one another in order to create this entity (network), the network of relations passes through a series of 'states' (or conditions) in which it is normal that variations and variability could emerge. The set of N agents can remain the same or can change (increase or decrease), which normally alters the states of the system of relations. Over the course of the interactions, it is practically inevitable that the relations will encounter variability. But the group (network) will be able to succeed (or will fail) if it is (or is not) able to manage variability while maintaining the stability – even in dynamic processes – of the associative relation's quality and particular powers without altering it (trans-mutating it) into another type of relationality. An example of change in

this sense occurs when an associative relation constituted for a cultural or sporting purpose is changed into a relation of support for a union or political party. However, this type of change is much more frequent in interpersonal relations: for example, when a professional relation between a professor and his secretary becomes a romantic, or even a marital relation.

The way of proceeding that manages variability while maintaining the stability of the constitutive relation's *proprium* is called relational steering in that it operates with/on/through the relations between the network's agents in order to realise the group-network's sociability (relational good), from which solutions that are useful to each participant originate. If we consider the network as a system, the agents that constitute the network and enter into the play of interactions are not governed only by positive or negative feedback mechanisms ("I approve of or do not approve of what others do"), but also by feedbacks on the we-relations ('let us reconfigure the relationality of our we-relation'), especially if the agents intend to build and manage a system that must achieve its objectives.

In such a case, the agents ask: "Do the relations that we have with one another really correspond to the relations that are necessary for achieving our objective?" If the network has goals (which does not always happen, or is not clear, or is conflictual, as is often the case in voluntary organisations) and intends to reach them, it must manage the kind of relationality on which it was constituted (in which it engaged itself) by reconfiguring its elements (actions and relations) and managing them in such a way as to ensure that it will be able to produce its relational goods and have them work in a satisfactory way.

When interactions take place, the web-system existing among the agents makes each agent retroact on other agents differently from before, in a dialogical, contractual, concerted manner, with open or conflictual coordination, etc. But if the network's goal (production of a relational good) is to be reached, it is necessary that the increase of the network's and its agents' variability does not alter the constitutive relationality's qualities and specific powers. Take for instance a social cooperative that is supposed to produce pro-social (relational) goods not only for its members but also for the surrounding Community. Its relational structure is based upon some rules that involve, in particular, taking its political decisions through democratic processes and devolving at least part of its profits to pro-social activities in the local community (this is its we-relation). The internal democracy and the donations to the community can be managed in different ways, but what is essential is keeping this specific relational organization. This can happen only on the condition that relational feedbacks are at work on the we-relation. If this relationality is altered, relational goods or evils of *another type* can be produced. For instance, if a social cooperative (as often happens) step by step abandons a democratic decision making process by letting some people (e.g. its board) take the most important political decisions and/or reduces the redistribution in favour of the outside community to give priority to its internal investments, this cooperative alters its constitutive relationality so that its internal relational goods and/or the relational goods previously provided for the local community are diminished or eliminated (Bode 2013; Denny and Seddon 2013). The different goals (and their consequences) have been brought

about not by overtly voting for or against a clear choice represented by an alternative ('We should continue to be pro-social' versus 'We should proportionately award ourselves more', probably justified by the services rendered to the community), but by 'muddling through' relational feedbacks in the organizational structure and practices of the cooperative, where the alternatives yes/no are substituted for by 'neither' or 'a little yes and a little no' at the same time, in various combinations that alter the relationality of the organization.

Alterations can be of different kinds. They can be a way of proceeding that makes use of trade-offs (bound morphogenesis) or can produce radical changes (unbound morphogenesis). We know that most outcomes of contestation are compromises, where nobody gets exactly what s/he wants. Compromises can be a way to keep certain kinds of morphogenetic cycles going, which produce an adjustment of the conditioning structure. What I am arguing is that, at the second order of their relations, the agents/actors may not only rearrange their options by negotiating the trade-offs (in this case their considerations are something like 'what can we get away with without totally alienating the other party or totally abandoning our commitment'), but they can change the whole frame of reference of their actions and relations, by revising the fundamentals of the organization (be it a social cooperative or something else). To do this, they would adopt a different logic¹⁷ which is relational because it *redefines* the rules of the organization and, as a consequence, the ways to combine its goals, means and basic value-commitments (in this case their considerations are something like 'let us change the rules in order to reconfigure the whole relationality of our enterprise').

It is worth recalling that, in my view, the 'logic' corresponds to the normative dimension (rules) of social relations (Donati 2014, pp. 150–159). The reason why a relational feedback is distinct from (first order) positive and negative feedbacks does not lie in the fact of having a different referent (in a trade-off) within a binary logic (yes/no), but in changing the rules of the relational context. In illustration, take China and its contribution to global warming through its (new) industrial pollution. Suppose the international community says, China, you must cut back your dirty emissions to the reduced *norm* that our meeting has just established. Now, China has to examine not just its first order wish to industrialize fast, but also its second order relations to the international association. For obvious reasons, it does not want to respond with either 'yes – damaging its industrial progress, or 'no – damaging its international relations'. So, it rejects both responses (grouping them together as being 'unacceptable') and responds by saying, 'That's not fair, you developed countries were as dirty as you liked in the process of getting where you now are; what would be fair is a *reduced* norm for China'. This considers both China's material interests but also its wish to sustain 'good'/workable international relations. Then,

¹⁷ Here I maintain that logic concerns a form of reasoning that adopts a set of rules. Classical logic is the science of reasoning that allows us to analyze a way of thinking in order to determine whether it is correct or not. To use the technical terms, we determine whether the reasoning is valid or invalid. There are other sorts of logic, such as fuzzy logic, or relational logic, which obey different rules of reasoning.

the international association has to reflect on its relation with China, not simply the control of pollution. Now, the international association can remain within the binary logic, and in this case it has to choose between accepting China's compromise formula or rejecting it (accepting it means pollution will be reduced, although the reduction will be less than originally wanted; rejecting it does nothing to reduce pollution and simultaneously damages international relations, with unknown effects). But the association can look for a different mode of relating to China (or vice versa) and say: 'let us redefine the norms of reasoning (the logic) we have adopted and the whole relational context of the issue' in such a way as to focus upon our relationship and go beyond the restricted issue of what could be the degree of pollution reduction right now. In this case a relational logic comes into play. It opens up a horizon of chances/opportunities. It is a phase in a cyclical process which, of course, at the end of each cycle will bring the parts to accept or reject the emergent proposals by responding with first order positive or negative feedbacks.

4.4 Some Conclusions

In this chapter I have attempted to show that the generative mechanism in the field of social phenomena consists in creating a new relationality through 'regular' relational feedbacks. These are different from simple aggregative mechanisms (which reinforce reproduction through negative feedbacks or deviation through positive feedbacks). Relational mechanisms can produce new social forms by combining opposites rather than stabilising their distance or enhancing their dualisms.

The relational logic is focused upon the relations involved between the elements and their context, and responds to the need for new combinations between convergences and divergences instead of approving or refusing one possible solution. This logic does not say 'yes to this and not to that', but asks: 'shall we maintain or change the relations between 'this and that' by (re)defining the whole relational context in which 'this and that' occur?'. This logic does not assume that the participants will put one common good first – for instance, international harmony in the case of environmental pollution previously discussed. Certainly the participants to the negotiation, or some of them, would counter that they are the 'true' seekers of the 'Third', the common good as planetary survival. But the relational logic does not presuppose that the contenders aim at producing a relational good in a disinterested way. It assumes only that they are interested in playing a relationship, out of which there is only isolation or war (which, curiously enough, feed one another because of the relational feedbacks inherent in the generative mechanisms of their relations!).

To stay in (and play) a relationship requires relational feedbacks. Therefore, a generative mechanism is a special organisation of a network of entities and their relations that brings about a particular kind of 'tendential' outcome, whereas elements and relations are endowed with their own specific properties and causal powers. The outcome can be said to be a 'tendency' in so far as it is in line with the expectations

of an observer who can view the recurrence of that outcome as a confirmation of a relational configuration of the network that produces it within a certain range of variability. Can a generative mechanism be a mechanism that does not produce a tendential outcome as well? To my mind, the answer is the following: any mechanism is a causal relationship that, as such, can be more or less ‘creative’; but, if a sequence “IP (inputs) → Os (outputs)” produces erratic outcomes (i.e. different changes in outcomes), then it is not a generative mechanism proper, it is simply a relation of uneven causality.¹⁸ As Archer points out (personal communication) the result of radically different outcomes can also mean that: (a) the generative mechanism postulated is simply wrong, or (b) it exists unexercised because of countervailing powers (such as religious practice under Communism), or (c) there are many intervening and distorting contingencies.

To illustrate this point, let us take the example of new civil actors that move beyond the binary distinction between profit and non-profit activities by realising a relationally complex combinatory social formation between the two terms. The emerging social formation is new to the extent that the non-profit activities are not instrumental to the for-profit ones. The relationality between the two kinds of activity generates a ‘Third’. This operation makes it possible to have the one and the other together, by creating new synergies between them, whilst placing limits on each. We find empirical examples in the spread of many different initiatives: the so called ‘economy of communion’, ethical banks, civil foundations, novel forms of social cooperatives and corporate social responsibility, and those initiatives called civic crowd-funding or ‘social bonds’ whose aim is to create social enterprises that pay out the capital invested (profit) while, at the same time, allocating resources to pro-social goals (of non-profit social utility). This means the creation of ‘social markets’ regulated by a principle of social reciprocity instead of the principles of monetary equivalence and functional performance. Sometimes these social formations can be seen as another – new – form of ‘mutual regulation’, a compromise between relationally contesting parties within the old *lib/lab*¹⁹ generative mechanism,

¹⁸In the causal chain that is formed within the black box, the dominant element or relation is not fixed for all time. It varies according to the overdetermination of the relations between the single causal factors and their uneven development. When a tendential (or regular) phenomenon happens as an outcome of a plurality of causal factors that stem from different relations, the overdetermination of the relational outcome giving birth to a new social formation means that none of the causal factors can INTP simply develop. For instance, a riot triggered by different marginalized social groups (such as impoverished social strata, the unemployed, ethnic minorities, disabled or ill people deprived of welfare benefits, etc.), in different times and places can result in quite different patterns of social changes and reforms of the societal system. The outcome depends on the overdetermination of the relationality that causes the emergent effect, which is the product of the reflexive processes operating within the complex whole, that is, by the overall relations in the complex whole. This is what I call here ‘uneven causality’.

¹⁹The term “*lib/lab*” is used to express the dual structure inherent in postwar Western democratic society, which involves the continuous negotiation and compromise between, on the one hand, the freedom of market (*lib*) and, on the other hand, the state or political-administrative system in its function of control exercised for the sake of social equality (*lab*). *Lib/lab* therefore represents a generative mechanism of a relational configuration that allows a certain range of regular outputs in

but in other cases it is not an outcome allowed within the range of variability of the generative mechanism that was previously at work, since, in the latter cases, new social networks are created that work by enhancing a new sociability, with different qualities and properties, since they rely upon a generative mechanism that abandons the lib/lab structure (what I call the principle of ‘relational inclusion’: Donati 2011, p. 231). The tendency to spread these initiatives is underway. It demonstrates that the civil economy can be developed only when there is an activation of generative mechanisms that move beyond the play of positive and negative feedbacks between the capitalistic market (*lib* side) and the state (*lab* side). The new alternatives do not stem from an outright denial, i.e. a simple negation of the ‘lib/lab’ structure. They are not thought of and acted upon as a sharp choice between ‘Not lib/lab’ and ‘A new alternative’. Policies can require a mix of measures (e.g. the working together of different mechanisms, for instance in personal and universal standardized social services). Distinctions can be, and usually are, relations!²⁰ The new actors are not like new political parties entering the political arena to compete with the other parties in a zero-sum game. What changes is not only the set of the subjects/issues playing the same game, but the whole process of ‘making society’, since making society becomes a new game that is devised to be a non-zero-sum game (where participants can all gain or suffer together), i.e. a new relational configuration working through new generative mechanisms.

In sum, *a social mechanism can be defined as a tendential relational outcome* (given a heavy *ceteris paribus* clause) *between certain factors or events – and their properties – in society*. Invariant relational outcomes are exceptions that correspond to mechanical mechanisms.²¹ In the social field, both invariants and trends, at any rate, are subject to the need for giving them a meaning and be managed meaningfully. This is the social, political, economic and policy problem. Let me give a couple of examples. Take the case of the relation between economic growth (in terms of GNP) and employment rates. During the first industrialization, the measures taken to increase the former were supposed to foster an increase of the latter, and so it was. But in late modernity this correlation does not hold any longer, notwithstanding the attempts to renew the old mechanisms. Therefore, social, economic and political actors have to give a different meaning to the previous generative mechanisms and reconfigure anew the relationality between economic growth and employment if they want to produce the desired effects. Or let us consider the measures taken to achieve equal opportunities for men and women, as well as for ethnic minorities, in particular via the welfare state. It has become clear that the mechanisms used to date

which free competition and regulations for the equality of opportunities are strictly linked together according to the Hobbesian social order above mentioned.

²⁰As I have theorized elsewhere, there are three main semantics of ‘distinction’: dialogical/dialectical, binary and relational (Donati 2009). In my critical realist perspective, the relational one is the most comprehensive.

²¹Invariants can be found in primitive or simple societies, where social life is regulated by what Durkheim called ‘mechanical solidarity’.

have created the so called ‘glass ceiling’ phenomena,²² and therefore other mechanisms are called into question that should not change the goal, but the relational configuration of the measures adopted.

As a social relation that is real *sui generis*, relatively independent of the subjectivity of the individual agents/actors, a social mechanism has the property of being *necessary* (causality is definite). For example: certain empirical research finds that “the level of anxiety experienced by reflexive agents at the level of discursive and practical consciousness is a positive function of the degree to which their day-to-day routines are disrupted.”²³ Assuming, for the sake of argument that this is the case, what would make this relation a ‘generative mechanism’ is the fact that, *even if agents know about this relation, they cannot obviate the force specified in the relation as an emergent* (if an agent understands the processes involved in the mechanism, this same agent will still experience anxiety when his or her routines are disrupted). The agent/actor may use knowledge of the mechanism to diagnose the problem and take corrective action. In so doing, the agents/actors confirm rather than refute the mechanism.

With respect to this way of construing social mechanisms, I have maintained that the agent/actor can try to manage the mechanism not by changing it (it is necessary in and of itself!), but by giving it a meaning that can change the agents and the relational context and its outcomes. In this sense, the previous mechanism can be replaced by another one.

When people become aware of a social mechanism, they can adopt different strategies to cope with it, depending on the kind of reflexivity (personal and relational) that they have and can put into practice, taking account of the system *reflectivity*, which is to perform the reflective operations required by the constitutive rules of the system. In the above example, people can try to dodge the disruption of routines or take drugs against anxiety, which are merely defensive strategies that do not go very far. In these cases, people leave the mechanism (i.e. the causal relation between the disruption of routines and anxiety) untouched, since they treat it as ‘mechanical’. On the other hand, they can adopt other courses of action by giving a new meaning to the relation (mechanism). If they focus on it and change its meaning by considering it not as a mechanical requirement, but as a challenge, they can try to manage it in a different way so as to replace it with another, more positive mechanism. For example, they can cope with the disruption of ordinary routines by giving to the relations enmeshed in these events (the relations with themselves, i.e. in their internal conversation, and the relations with other people, in the networks to which they belong) a meaning that stimulates their meta-reflexivity. In this case, the relation between the factors/events involved (their feelings of anxiety, on the one hand, and their daily practices in social life, on the other) becomes positive in

²² A glass ceiling is a political term used to describe the unseen, yet unbreachable barrier that keeps minorities and women from rising to the upper rungs of the corporate ladder, regardless of their qualifications or achievements.

²³ I take this example from Turner (1986, p. 976) in order to argue that sociology cannot be merely a positivistic natural science, as he maintains.

the sense that people are stimulated to imagine that this mechanism (relation) can tendentially produce other, different and welcome outcomes (emergents) that can be stabilized as 'regular'.

By giving this mechanism a vital meaning, the agents/actors do not simply accept or refuse the given relation constituting the mechanism (they do not react only with positive or negative feedbacks), but they react upon it by using relational feedbacks that produce different relational perspectives and outcomes. This means that agents/actors redefine the generative mechanism not in itself (the old mechanism is still there *pro tem* {like lib/lab}), but in its meaning, by focusing on the relation that constitutes it in order to change themselves and the definition of the relational context so as to generate other relational outcomes because a new generative mechanism has meanwhile been 'adopted'. This is what I call relational steering: it is something possible to humans in the social world that can never be a property or power of machines.

References

- Ahuja, G. (2000). Collaboration networks, structural holes, and innovation: A longitudinal study. *Administrative Science Quarterly*, 45(3), 425–455.
- Archer, M. S. (1979). *Social origins of educational systems*. London: Sage, (second edition 2013 Abingdon, Routledge).
- Archer, M. S. (1995). *Realist social theory: The morphogenetic approach*. Cambridge: Cambridge University Press.
- Archer, M. S. (2003). *Structure, agency and the internal conversation*. Cambridge: Cambridge University Press.
- Archer, M. S. (Ed.). (2010). *Conversations on reflexivity*. London: Routledge.
- Archer, M. S. (2013). Social morphogenesis and the prospects of morphogenic society. In M. S. Archer (Ed.), *Social morphogenesis*. New York: Springer.
- Ashby, W. R. (1956). *Introduction to cybernetics*. New York: Chapman & Hall.
- Ashby, W. R. (1958). Requisite variety and its implications for the control of complex systems. *Cybernetica (Namur)*, 1(2), 83–99.
- Bode, I. (2013). In futile search of excellence. The 'muddling through agenda' of service-providing social enterprises in contemporary Europe. In S. Denny & F. Seddon (Eds.), *Social enterprise. Accountability and evaluation around the world* (pp. 196–212). London: Routledge.
- Buckley, W. (1967). *Sociology and modern system theory*. Englewood Cliffs: Prentice Hall.
- Burt, R. S. (2005). *Brokerage and closure: An introduction to social capital*. New York: Oxford University Press.
- Denny, S., & Seddon, F. (Eds.). (2013). *Social enterprise. Accountability and evaluation around the world*. London: Routledge.
- Donati, P. (2009). Beyond multiculturalism: Recognition through the relational reason. *Polish Sociological Review*, 166(2), 147–177.
- Donati, P. (2011). *Relational sociology. A new paradigm for the social sciences*. London/New York: Routledge.
- Donati, P. (2013). Morphogenesis and social networks: Relational steering not mechanical feedback. In M. S. Archer (Ed.), *Social morphogenesis* (pp. 205–231). New York: Springer.
- Donati, P. (2014). Morphogenetic society and the structure of social relations. In M. S. Archer (Ed.), *Late modernity: Trajectories towards morphogenic society* (pp. 143–172). Dordrecht/Heidelberg/New York/London: Springer.

- Fleming, L., et al. (2007). Collaborative brokerage, generative creativity, and creative success. *Administrative Science Quarterly*, 52(3), 443–475.
- Gorski, P. (2009). Social ‘mechanisms’ and comparative-historical sociology: A critical realist proposal. In P. Hedström & B. Wittrock (Eds.), *Frontiers of sociology* (pp. 147–194). Leiden/Boston: Brill.
- Gross, N. (2009). A pragmatist theory of social mechanisms. *American Sociological Review*, 74(3), 358–379.
- Guardini, R. (1925). *Der Gegensatz*. Mainz: Matthias-Grunewald.
- Hedström, P. (2005). *Dissecting the social. On the principles of analytical sociology*. Cambridge: Cambridge University Press.
- Hedström, P., & Swedberg, R. (Eds.). (1998). *Social mechanisms: An analytical approach to social theory*. Cambridge: Cambridge University Press.
- Hofkirchner, W. (2014). On the validity of describing “Morphogenetic Society” as a system and justifiability of thinking about it as a social formation, ch. 6. In M. S. Archer (Ed.), *Late modernity: Trajectories towards morphogenic society*. New York: Springer.
- Luhmann, N. (1995). *Social systems*. Stanford: Stanford University Press.
- Luhmann, N. (1997). Limits of steering. *Theory, Culture and Society*, 14(1), 41–57.
- Needham, R. (1987). *Counterpoints*. Berkeley: The University of California Press.
- Porpora, D. (2015). Why don’t things change? The matter of morphostasis. In M. S. Archer (Ed.), *Generative mechanisms transforming the social order*. New York: Springer.
- Skvoretz, J. (2013). Diversity, integration, and social ties: Attraction versus repulsion as drivers of intra- and intergroup relations. *American Journal of Sociology*, 119(2), 486–517.
- Turner, J. H. (1986). Review essay: The theory of structuration. *American Journal of Sociology*, 91(4), 969–977.
- Ugazio, V. (2013). *Semantic polarities and psychopathologies in the family: Permitted and forbidden stories* (p. 37). London: Routledge.
- Vanderstraeten, R. (2002). Parsons, Luhmann and the theorem of double contingency. *Journal of Classical Sociology*, 2(1), 72–92.

Part II
Venturing Morphogenetic Mechanisms

Chapter 5

“Mechanisms” at Work in Information Society

Wolfgang Hofkirchner

The old-fashioned way to define a system was to define it by a set of elements and relations between these elements (Hall and Fagen 1956, 18). Later on, an environment was added to the definitions. However, such approaches could not account for self-organisation and complexity, which gained significance from the 1960s onwards. Findings showed that the most interesting developments in the real world happen “on the edge of chaos”; complex and self-organising systems find their way between determinate order and indeterminate disorder and exhibit a behaviour that is the most flexible, adaptable and creative (Kauffman 1993). Peter Corning’s synergism hypothesis (Corning 1983) had already pointed in that direction by postulating the emergent production of synergy effects as a third essential ingredient of a definition of systems that are capable of evolution besides containing elements and relations between them (and besides the environment, which is excluded from the system).

Actually, it is hard to imagine a system definition that does not do justice to the process of self-organisation, which leads not only to the emergence of a new quality of the interaction between single entities, namely to the emergence of a new level above the level of interaction, but also to the dominance of the new quality of the entities as elements of the system, namely the dominance of the macro-level over the micro-level. It was Ludwig von Bertalanffy who when talking about the intra-systemic hierarchy of living systems emphasised “the necessity of investigating not only parts but also the relations of organization resulting from a dynamic interaction and manifesting themselves by the difference in behaviour of parts in isolation and in the whole organism” (1950, 135). He clearly distinguished between the interaction of elements, on the one hand, and organisational relations, on the other, and

W. Hofkirchner (✉)
Bertalanffy Center for the Study of Systems Science,
Paulanergasse 13/5, A-1040 Vienna, Austria

Institute for Design and Technology Assessment, Vienna University of Technology,
Argentinierstrasse 8/E187, A-1040 Vienna, Austria
e-mail: wolfgang.hofkirchner@bcsss.org

anticipated what was later called “downward causation” (Campbell 1974) from the organisational relations to the interaction of elements or the “slaving principle” (Haken 1978).

So it does not come as a surprise that the philosopher of science Mario Bunge introduced another ingredient necessary for the definition of systems. Anyway, he was the first to do so explicitly. He called it CESM model: a system is defined (2003, 35) as the quadruple $\mu(s) = [C(s), E(s), S(s), M(s)]$. While C refers to the elements (“composites”), E to the environment and S to the organisational relations (“structure”), it is now M that denotes the processes that are characteristic of the system – M stands for “mechanism”.

Given the context described above, Bunge’s “mechanism” can be interpreted as a generic one – as self-organisation. While “considering that a system makes itself distinct from its environment by its very process of self-organisation (i.e. this is a secondary rather than primary feature of evolutionary systems)”, I define evolutionary, i.e. self-organising and complex systems as containing “(1) elements E that interact such that (2) relations R emerge that – because of providing synergistic effects – dominate their interaction in (3) a dynamics D2” (Hofkirchner 2013a, 105 – italics removed, W.H.) and interpret Bunge’s C, S, and M as E, R, and D, respectively.

I am using the term “dynamics” because I do want to avoid any misunderstanding that would evoke associations with a mechanical process or a mechanistic view. I know that Bunge did not want to have such associations and that Critical Realism does not intend them either.

Self-organisation is the most fundamental real-world dynamic. I want to go on stating that everything sociologists are used to calling “mechanisms” is rooted in self-organisation; it is a particular part of the synchronic build-up of social systems and/or part of the diachronic development and evolution of social systems. There is a chain of concretisations that links each of the more particular “mechanisms” to the basic, universal “mechanism” of generic self-organisation. In my chapter in the first volume of this book series (2013b) I maintained that self-organisation is a “mechanism” that can be interpreted,

- first, from a meta-theoretical perspective so as to make it significant for every system;
- second, in a grand-theory perspective to signify all social systems;
- third, in a theoretical perspective that applies to the contemporary state social systems are in.

In my chapter in the second volume (2014) I argued that

- the first perspective focuses on a dialectic of integration and differentiation;
- the second perspective concentrates on a dialectic between “socialisation” and “individualisation”;
- the third perspective concerns a possible meta-system transition to a Global Sustainable Information Society through a reflexive revolution that involves social antagonisms.

Of course, there is a middle-range theory perspective too and there are more fine-grained perspectives that are concerned with ever more particular “mechanisms”, but they are all part and parcel of less particular “mechanisms” forming a hierarchy of a historically evolving web of self-organisation.

In this chapter I want to discuss “mechanisms” generating information society. In the first part, I clarify the basic assumptions underlying my approach to “mechanisms”; in the second part, I discuss candidates for being the “mechanisms” that are said to bring about information society; and in the third part, I present a “mechanism” for the advent of a Global Sustainable Information Society.

5.1 Critical Systemic Thinking

When developing the so-called Salzburg Approach to Information and Communication Technologies (ICTs) and Society in the years 2004–2010, the sociology of technology used by my working group at the University of Salzburg was based upon a combination of critical thinking and systems thinking – of Critical Theory and Systems Theory. Criticism and systemism both include what I call the Logic of the Third (Hofkirchner 2014a). The Logic of the Third is the foundation of a critical social systems theory.

“Criticism is a method oriented toward recognising and sublating of contradictions.” This is how, in the aftermath of the 1960s, Kurt P. Tudyka (1973, 9 – my translation) put it in his introduction to critical political science. This postulate, however, is directive not for political science alone but for all social science disciplines. According to it, criticism gives particular answers to three basic questions confronting social science:

- First, what should be the aim of social science?
- Second, what should be its scope?
- And third, what should be its tools?

That is why Tudyka’s text is useful when discussing the critical stance of critical social systems thinking I am advancing (Table 5.1).

Table 5.1 Criticism and systemism in social sciences

	Criticism	Systemism
Aims	The sublating of antagonisms originating from heteronomy by providing knowledge of concrete utopias (revolution)	The social systems’ transformation into higher-order states based upon scientific anticipations of sustainable future states
Scope	Dialectic of agency and structure (interplay of individual and society)	Social systems as self-organisation of actors giving rise to emergent organisational relations
Tools	Putting phenomena in the context of overarching society (recognition of history and totality)	Putting observations in the context of social systems’ development/evolution

First, regarding the aims of critical social science, Tudyka says “Science is partisan” (1973, 25 – my translation), willingly or not, but it should be aware of that. Before the Positivism debate in German sociology between the Frankfurt School type of Critical Theory and positivist Critical Rationalism, the context of application in which scientific knowledge was used to solve problems and was transformed into technologies, whether material or ideational, was not deemed to be sufficiently scientific. The ideology of value-free science excluded it from pertaining to science. According to Tudyka, the task of social science should not be to mirror reality, thereby suggesting the immutability of that which needs to be changed, but should rather aim at conceptualizing a concrete utopia that transcends what is empirically undesirable by reference to what is really possible (Tudyka 1973, 24–25). Critical social science is, in the final analysis, critical because it measures the empirical against the possible reality that is desired. Concrete utopia (Ernst Bloch 1967) is the Third that allows for assessing the difference between them. Antagonisms that characterise social relations of domination are to be revealed in order to help sublimate those antagonisms.

Since the founding of General Systems Theory through Ludwig von Bertalanffy, Anatol Rapoport and others it goes without saying that Systems Theory is normative too. It can describe spaces of possibilities that might or might not be realised by the social actors involved. It can describe possibilities that lead from one state of the system to a state that better fulfils functions desired by the actors and marks a higher order of the social system – which is a good. And it can describe unsustainable states – which are evils – and possibilities of eradicating dysfunctions harmful to actors. By describing goods and evils and how they can be amplified or left behind, systems thinking makes explicit that it is value-laden, crosses the border from description to prescription and provides a Third as standard of comparison.

Second, regarding the scope of critical social science, Marx (1852) put it in his famous words: “Men make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past.” These circumstances amount to an objective reality that human beings cannot avoid facing when acting. That reality is known as social relations that together form the structure of society. Social theory is still divided over the question of how to conceive of the link between agency and structure. Social critique considers it a dialectical connection which is said to exist once both relata are opposed to each other, yet depend on each other, and neither can be replaced with the other without simultaneously replacing the mode of the connection between them. In this dialectic of agency and structure, structure is a Third because it connects social subjects to each other. It orders the behaviour of the subjects through opportunities that enlarge and/or limit their options.

In stark contrast to systems concepts of Luhmannian origin, Evolutionary Systems Theory (which is about complex systems organising themselves, Hofkirchner 2013a) as applied to social systems, models actors and structure as being coupled in a feed forward and a feedback loop, called self-organisation, which leads to the reproduction of the system or to its transformation, including possible meta-system transitions which usher in new social formations. Thus the object of inquiry comprises: (1) the actors that interact to form the social system and; (2) the

social relations emerging from, and dominating, their interaction as well as; (3) the interplay between actors and relations. The actors populate the so-called micro-level of the social system, whereas the social relations are located on the so-called macro-level. The macro-level is emergent from the micro-level and, by assuming such a hierarchy, the relations on the macro-level are assumed to exert downward causation on the actors on the micro-level (see Hofkirchner 2013b, 136). Thus they play the role of the Third.

Last but not least, regarding the tools, Tudyka starts from the well-known quote of Karl Marx (1894) that “all science would be superfluous if the outward appearance and the essence of things directly coincided.” The method of social-scientific investigation needs to be aware of the incongruence of appearance and essence and is an attempt to reveal the essence and to reconstruct the link between the two. Tudyka writes (1973, 12 – my translation): “Criticism gains power, when it can put the object in the context of societal totality, thus recapturing it from illusive empirical isolation and demonstrating its historical society-wide character. For in the isolated consideration of single aspects, criticism gets lost practically and cognitively and surface manifestations throttle critical thought”. Thus the tools that guarantee critical thinking in social methodology put the object of inquiry in the context of history and society as a whole. History and social totality, then, plays the role of a Third that is sought after to connect the single aspects. By theoretically reconstructing the historical totality and relinking the single aspects to that Third, social science is able to give meaning to empirical findings and to provide scientific understanding.

Systemism – in contradistinction to positivism – is not alien to that task. Proper tools for critical social methodology are made available by systems thinking. Every kind of systems thinking is close to the idea of always incorporating a Third in that it is a feature of such thought to look upon every object as immersed in an overall systems context. Evolutionary Systems Theory treats any event or entity as process, that is, as the result of a process that propels evolution of systemic interconnectedness. That way it works on a meta-level that provides a Third to weave the red thread among the components at the empirical level. This symbiosis of criticism and systemism becomes obvious when focusing on the question of the behaviour (“Verhalten” in German) of social actors and the social relations (“Verhältnisse” in German) between them. This question has been attracting attention anew with Pierpaolo Donati’s paradigm of Relational Sociology (2011). Behaviour can be investigated empirically. Not so social relations. The latter can be identified only through theoretical endeavours. Social relations are, so to speak, that which is essential for behaviour, that is, what is common because it is necessary, and may be labelled “lawful” in this sense. Social relations appear in concrete behaviour. In systems terms, they are the enablers and constraints of the actions and interaction of the actors. They determine, in a way, the behaviour of the actors. In this way, behaviour can be understood by referring to its underlying social relations. But no behaviour can be explained by resorting to the actors or agency alone. Enablements and constraints are relational, they are structural in nature, not agential. They are the Third that relates actors, and individual agency realises only possibilities that are undergirded by social relations.

5.2 “Mechanisms” of the Build-Up of Information Society

“Mechanisms” generating the advent of information society are about the relation between the so-called Information and Communication Technologies (ICTs) and society. They are a special instance of a general assumption about how technology and society are to be related.

Ideal-typically, approaches to relating these factors can be classified according to different ways of thinking. One is to reduce the complex to the simple (reductionism). Another projects the complex onto the simple (projectivism). Yet another views the complex and the simple as disjunctions (disjunctivism). Only a way of thinking that denies rendering them in terms of absolutes can overcome the one-sidedness of each and integrate the simple with the complex (integrativism) (Hofkirchner 2013a, 39–46).

Assuming that the whole is more complex than each of its parts and that ICTs are part of society; that subsystems of society can be ordered in a hierarchy such that higher-level subsystems are more complex and that technological factors like ICTs belong to a subsystem on the lowest level; then assumptions about “mechanisms” that inform us about the causes that brought, or still are bringing, about the advent of information society can be differentiated according to the way the sociology of technology conceives of the connection between ICTs and society (Table 5.2).

Four approaches can be distinguished (Hofkirchner 2010).

- The reductionist way of thinking dominates positivistic sociological approaches. Technology is deemed to be the independent variable and society the dependent one. This is called the push approach. Technological development pushes the development of society. This approach of sociology of technology is known as “techno-determinism”.
- Projective thinking is characteristic of interpretivist schools in sociology. Society plays the role not only of a necessary but also of the sufficient condition that results in technological constructs. Society pulls, so to say, technological developments. That is “social constructivism”.

Table 5.2 Approaches in sociological thinking towards technology

Sociological approach (way of thinking)	Sociology of technology approach	How to relate...	
		... technology...	... and society
Positivism (reductionism)	Technodeterminism (push approach)	Independent variable	Dependent variable
Interpretivism (projectivism)	Social constructivism (pull approach)	Explanandum/ understanding	Explanans/ narrative
Postmodernism (disjunctivism)	Techno/social dualism	Incommensurable fields	
Critical thinking (integrativism)	Mutual-shaping approach (integrated technology assessment and designing of technology)	Circular influence: technology shapes society shapes technology	

Table 5.3 Sociology of technology approaches to determinants and values

Approaching determinants	Approaching values		
	Eutopianism	Dystopianism	Pro-active-ism
Technodeterminism (push approach)	Technological progress = social progress	Technological regress = social regress	–
Social constructivism (pull approach)	Social progress = technological progress	Social regress = technological regress	
Techno/social dualism	Technological ≠ social development		
Mutual-shaping approach	–		Techno-social design

- That technology and society are incommensurable fields, which are disjunctive, is a statement that is part of postmodernist strands of thought, here called “techno/social dualism”.
- Critical thinking sees a dialectic of technology and society. There is a circular influence, the first shapes the second and the second shapes the first. It is a “mutual-shaping” approach as represented in integrated technology assessment and designing of technology.

These approaches to determinants come in three varieties when evaluating the connection conceived between technology and society. “If they look upon it favourably and highlight the opportunities, they are called eutopian. If they look upon it unfavourably and underline the risks, they are called dystopian. Here too the distinction is an ideal-typical one” (Hofkirchner 2010, 173). A third variety stresses ambiguities. Accordingly, the four sociological approaches to technology approaches can be cross-tabulated according to their intrinsic evaluations (Table 5.3).

Eutopian as well as dystopian varieties, as long as they are based upon determinism or indeterminism, are not consequential for practice. Either we live in the best of all worlds because technological progress automatically provides us with social progress or because social progress provides us with the appropriate progress in technology. In the first case, the world is digitalised, which makes society modern – that is the mainstream understanding of information society; in the second case society draws upon technology for community building – for managing sustainability in the ecological subsystem, liberating knowledge for all in the economic subsystem, empowering the people in the political subsystem, or enhancing smart life in the cultural subsystem, as different theories are depicted as theorising (Table 5.4). In both cases we need not to do anything about their progress.

Or we live in the worst of all worlds, as regress in one field yields regress in the other, and because it is determined to be so we cannot change it. In one case ICTs lead to virtualisation that increases vulnerability; in the other case there is a list of Orwellisations: the natural environment as well as the bodies of humans are colonised with the aid of computers, knowledge is monopolised, surveillance and info wars are ubiquitous, mind is manipulated by ‘disinfotainment’ (Table 5.4).

Indeterminism is not consequential either since neither development can influence the other. Such theories decouple both developments from one another. Life is

Table 5.4 Sociology of technology approaches to determinants and values concerning the information society

Approaching determinants	Approaching values		
	Eutopianism	Dystopianism	Pro-active-ism
Technodeterminism (push approach)	Informatisation	Virtualisation	–
Social constructivism (pull approach)	Community-building	Orwellisation	
Techno/social dualism	Decoupling		
Mutual-shaping approach	–		Designing a good society: Global Sustainable Information Society

either uninfluenced by ICTs or ICTs show a baroque development by marketing things you don't really need (Table 5.4).

It is only the pro-active variety that calls for action, for designing the future. "Since, according to it, development of ICTs and society is not fate, both have to be designed in order to turn development into progress" (Hofkirchner 2010, 173). An informed world netizenship is the rationale for a good society, a Global Sustainable Information Society (Table 5.4).

Deterministic and indeterministic, eutopian and dystopian approaches provide one-sided normative descriptions of "mechanisms" that are supposed to usher in information society. Determinism is not strict, but sets the limits of possibilities only, that is, it gives room for the realisation of different possibilities. Eutopias and dystopias reflect the ambiguities of social reality that are due to existing antagonisms, as I listed in Sect. 6.2 in my chapter in volume two of this book series (2014a). They reflect the tension between the opportunity to digitalise technology and the whole world and the risk of increasing the vulnerability of civilisation; the tension between the opportunity to manage sustainability and the risk of computer-aided colonisation of nature; the tension between the opportunity to liberate knowledge and the risk of its economic monopolisation; between the opportunity to empower the people and the risk of ubiquitous surveillance and information warfare between nation states; between the opportunity to enhance one's way of life and the risk of being manipulated by new media through 'disinfotainment'. By reflecting those tensions, theories contradict each other. Or they reflect the tension between the opportunity of an unneeded sophistication (baroquisation) of ICTs and the risk of unmet essential needs of the populations of the world by describing contraries (Table 5.5). Those tensions can be counterbalanced and annulled only by the development of informed world netizens.

"Mechanisms" are not based upon a one-to-one mapping of causes and effects (Fig. 5.1). In spite of designing technological means serving particular social interests, supervenient features accrue in the shape of the designed technology and open the space for possible impacts on society different from those intended. This is an ineluctable property of the complexity of real-world systems. These impacts can add value to the system, can be neutral, or can be partly or entirely detrimental to it.

Table 5.5 Sociology of technology approaches as to contradictions in the information society

Approaching determinants		Approaching values			
		Eutopianism	Dystopianism	Pro-active-ism	
Technodeterminism (push approach)		Digitising the world	Increase of vulnerability	–	
Social constructivism (pull approach)	Ecological	Managing sustainability	Computer-aided colonisation		
	Economic	Liberating knowledge for all	Monopolisation of knowledge		
	Political	Empowering the people	Ubiquitisation of surveillance and info wars		
	Cultural	Enhancing smart life	Manipulation by disinfotainment		
Techno/social dualism		Baroque development			
Mutual-shaping approach		–			Informed world netizenship

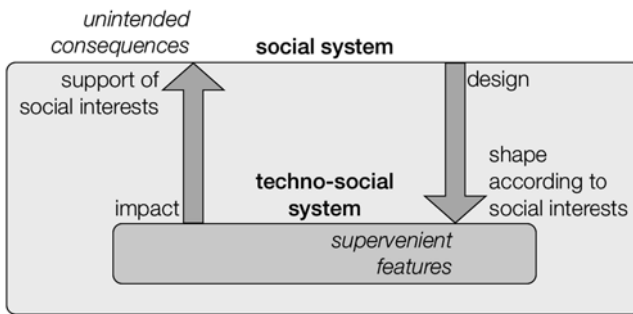


Fig. 5.1 Circular causality between techno-social and social systems yielding emergent effects

Detrimental impacts occur because social actors who are accountable behave as if they were autonomous systems, that is, restrict their focus to themselves and do not extend it to the Third, the social relations that assign to them the limits of positions they hold and of the roles they play.

The social construction of ICTs is not a “mechanism” per se that leads to a technology that can be used for that purpose for which it is made alone. Informatisation, the penetration of society with ICTs, is not a “mechanism” per se that leads to information society. The social system is characterised by a certain structure containing dysfunctionalities or not. The techno-social system can reinforce particular dysfunctionalities, quantitatively; it can spawn new dysfunctionalities, qualitatively; and it can support the mitigation, and even elimination, of those dysfunctionalities and the advent of new functionalities. There are contingent ways in which the “mechanism” of mutual-shaping of ICTs and society can work.

Manuel Castells (1998, 2001, 2004) is the most quoted sociologist on the advent of information society. He calls it network society. His account comes close to doing

justice to the dynamic outlined here. He states that ICTs allow social networks to deploy their advantage over hierarchical social organisation. He lists three levers for the transition:

- the needs of economy for managing flexibility;
- the demands for individual freedom;
- and the micro-electronics revolution.

Communication is being transformed by ICTs into “mass self-communication” (Castells 2013, 85). However, social systems stall creativity; rentier capitalism of the Microsoft type obstructs the questioning of intellectual property rights. On the other hand, the rise of mass self-communication enhances opportunities for social change. By unveiling how power relationships are constructed and exercised and how they can be altered, powers are challenged.

Also Derrick de Kerckhove (1998) stresses the potential for a watershed in the conditions of humanity: the opportunity for spectators to become participants. The Internet and the Web grow connections like a brain. Connectedness seems to be an inherent goal of self-organising processes. The challenge is to make sense of the changes. Following Marshall McLuhan, Kerckhove says, we are becoming responsible, for our extensions into and around the Earth. An ethical imperative is developing.

Philosopher of information Luciano Floridi (2007, 2010) sees everything becoming connected to the emerging infosphere, since anything is an informational agent. Thus, ICTs are making humanity increasingly accountable for the way the world is, will and should be. The infosphere must be preserved as a common space to the advantage of all.

5.3 A Possible “Mechanism” of Systemic Transformation of Conflicts from Antagonism via Agonism to Synergism

An obstacle to the reflection of the requirements for assuring a humane future is self-interestedness; what might be called “idiotism” (Curtis 2013). Etymology shows, “idios” meant in Greek Antiquity “the personal realm, that which is private, and one’s own” (12). In Neil Curtis’ view, “idios” also bears the stamp of “being enclosed”. He says that “the creation of the private through the enclosure of public or commonly held resources has historically been the primary means by which property has been secured for private use” (12). By the term “idiotes”, then, a person was denoted who is concerned with his personal realm only, with his own, and not with, say, the *res publica* and the fate of other human beings. Curtis convincingly demonstrates that neoliberalism, not only in ideology but also as a distinct social order, epitomises the principle of “idiotes”. Hence, “idiotism”, as signifying our current society. However, “idiotism” as a feature of society that functions via self-interested, self-concerned individuals in fact goes back to Antiquity and even earlier social formations in which domination appeared – the institutionalised

Table 5.6 Ontology of social relations

	Type of social relations	How to relate identity and difference (the one and the many)	
Universalism (egalitarianism)	Antagonism	Contradictoriness: conflict of mutually exclusive positions	Negation of any difference
Particularism (fundamentalism)			Imposition of one selected difference
Relativism (postmodern pluralism)	Agonism	Contrariness: co-existence of oppositions	Juxtaposition of every difference in their own right
Unity-through-diversity view	Synergism	Complementariness: supposition consistency	Composition made up by all differences

instrumentalisation of humans for one’s own interests, which goes hand in hand with the enclosure of the commons and the denial of free access to the latter. Global finance capitalism is just carrying idiotism to extremes. But it originated, as demonstrated by the *Odyssey*, when selfish “I”s, after having disguised themselves as incarnations of the “We”, as relics of the tribalist stage of social development, overtly entered the stage of heteronomic societies (see Holling and Kempin 1989, 17–31, who refer back to Horkheimer and Adorno 1969).

A transformation in the direction of a Global Sustainable Information Society needs a new “mechanism” – one that goes above and beyond antagonisms and uses the Logic of the Third. Applying the four ways of thinking (reduction, projection, disjunction, and integration) to the ontology of social relations, four types of social relations may be characterised yielding distinctive structures of identity and difference, the one and the many (see Table 5.6).

Every conflict – be it manifest or latent – has its cause in failing synergism. Every conflict is a deviation from a constellation of identity and difference in social affairs that is deemed to be the ideal one – unity through diversity: as many differences as possible diversity) produce as much identity as may be necessary (unity); the differences are identical in as much as they identify themselves with the identity they commonly produce, while identity, in turn, is differentiated as long as differentiation does not lead to the disintegration of identity. In game theory that is termed “non-zero-sum games” in “win-win situations”. Different actors in different positions compete only for the sake of the common identity.

Synergism fails in two cases – in the case of manifest conflict and in the case of latent conflict. In each case, identity and difference are not reconciled. However, in the first case, identity and difference are not reconciled because the positions of actors are contradictory to each other; whereas in the second case, they are only contrary (Hofkirchner 2014b).

The first case is what is commonly called “antagonism”. Antagonisms arise from constellations of positions, appearing in the subjective behaviour of social actors and materialising in objective social relations, such that a gain for either side is a loss for the other. Hence the term “zero-sum games”. Positions of actors are opposed to each other to such an extent that only one position can succeed. A manifest

conflict is a conflict of mutually exclusive positions. One position is the negation of the other. As an example, relationships of domination and submission and behaviour based upon them are always antagonistic.

Under closer scrutiny, antagonisms come in two varieties.

1. Either differences are erased and levelled down for the sake of identity under the guise of which dominion is erected. “Communist regimes”, in countries of failed “real socialism”, such as today’s Democratic People’s Republic of Korea have been accused of being an instance of that variety, disregarding individuals, their search for distinction, and creativeness. Another example of egalitarianism is that form of globalisation, said to wipe out barriers to the free flow of capital and undermine higher standards for the good life.
2. Or one particular difference is universalised as a common identity and imposed upon all other differences. Historic examples are the democracy in Ancient Greece that excluded the slaves or the universally proclaimed ideals of the French Revolution – *Liberté, Fraternité, Egalité* – which meant the interests of the rising bourgeoisie. Recently, Germany tried to establish a “Leitkultur” (a “guiding culture”) to which immigrants were expected to become subordinate. One of the most recent examples in the early days of December 2013 was the militant movement in Bangkok, un-representative of all sections of the population, but aiming at displacing the current government.

With both above versions, identity and difference are misrelated. The result is unity without diversity. Both are prone to egalitarianism or fundamentalism as they make a universal claim. One position is the plain negation of the other, which means they cannot exist together; one of them needs to be eliminated.

The second case of failing to integrate identity and difference, is not striving for the elimination of that which contradicts but the striving for positioning of what might be contrary. It is the co-existence of contraries, if any; it is the juxtaposition of differences. Any position is permitted. No position negates another position as there is no claim to a common identity. Each position is just different from the others, and even if it is contrary to another like black to white, it can exist alongside the other. Taking up an idea introduced by Chantal Mouffe (2013) – but interpreted in a different way from hers – this kind of conflict will be termed “agonism”. Agonisms are constellations of positions, appearing in the behaviour of social actors and materialising in social relations, such that no gain for either side has any implications for the other. What you get is diversity without unity. It is postmodern pluralism without a universal claim but for each difference having the same right.

The vision of a multi-ethnic society – in Germany called “Multikulti” (in contradistinction to the policy of “Leitkultur”) – with groups from contrary cultural backgrounds – the autochthonous population versus immigrants – living side by side, is a token of that type of conflict.

However, there is a seamless flow between latent and manifest conflicts, between agonisms and antagonisms, in both directions. A latent conflict can turn into a manifest one, since unrelated positions that can easily co-exist can become oppositions that still can co-exist; but such contraries can easily become contradictions.

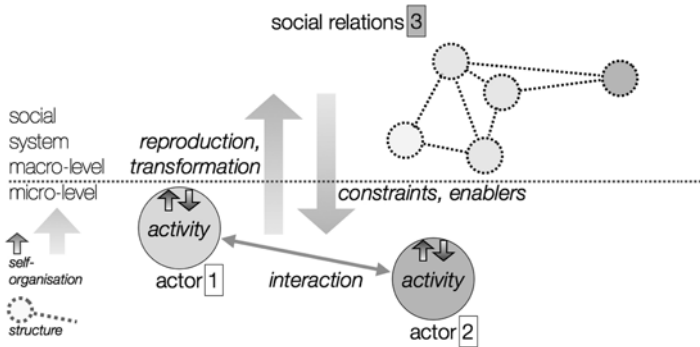


Fig. 5.2 Social system

Agonistic differences can be turned into antagonistic ones, when social actors (try to) impose their own interests and ideas on others by means of power. If agonism is paired with intransigency, denial of legitimacy of the other side’s position and defiance, it gives way to antagonism.

The amendment to the constitution of Croatia, which does not permit homosexual families, is an example of antagonising an agonism between contrary life plans and realising antagonistic social relations by means of legal codification. Thus any action that does so or might lead to doing so, may result in harmful consequences whether supposedly nonviolent or not. The ultimate reason for such escalation is that, according to the Logic of the Third, no possible alternative social relations but the ones that reinforce one’s own position enter into consideration. That is a “mechanism” for the transformation of agonisms into antagonisms.

The most important question is how a “mechanism” of turning antagonisms into agonisms can work, how it can take the edge off them, how it can sustainably de-escalate them – a question central to the work of Mouffe and to be answered here according to the same Logic of the Third – as the essence of any systemic conflict transformation.

In order to outline such a conflict transformation let’s start with considering the systemic view of social systems (see Fig. 5.2). First, elements of social systems are actors. At the highest resolution, actors are individuals; but they can be collective actors as well. An actor is herself a self-organising system that displays activity (agency) including actions; bottom-up and top-down processes assimilate and accommodate to inputs, restructuring herself and defining the limits of her activity. Second, a social system does not consist of one sole actor. Given a plurality of actors, we have interaction between them. For the sake of clarity, we limit the discussion to two interacting actors only. We call them actor 1 and actor 2. Third, not every interaction but some interactions, whether intended or not, allow social relations (structure) to emerge that give the interaction a relatively stable duration. This emergence marks a leap in quality, a jump from the micro-level of the social system to its macro-level. Their social relations function as constraining and/or enabling conditions for the actors and their interaction. Thus the actors reproduce the social

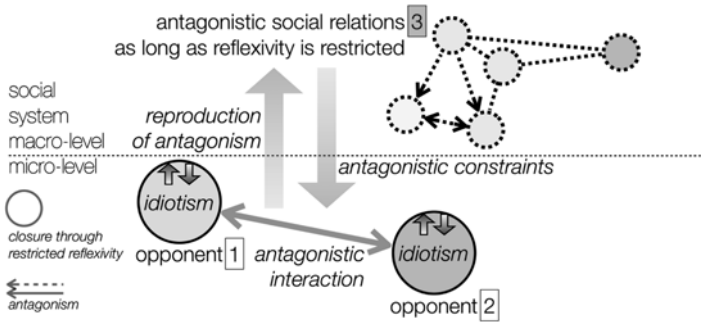


Fig. 5.3 Antagonistic conflict

relations – by which they maintain the social system as a whole – or they transform the social relations – by which they restructure the whole social system. This entire process comprises the self-organisation of the social system. The social relations are given the number 3 to indicate the Third in a social respect.

Now, let us use that framework to characterise an antagonistic conflict (see Fig. 5.3). In doing so, I draw upon the concept of reflexivity as introduced by Margaret Archer (above all 2007 and 2012) and combine it with the distinction between a restrictive capability to act and a universalised capability to act (“restriktive” vs. “verallgemeinerte Handlungsfähigkeit”) laid down by the Berlin school of Critical Psychology (Holzkamp 1983). The antagonism inheres in the social relations that via constraints convey the antagonism down to the micro-level, set limits to the interaction of the actors who then restrict their reflexivity to their own (idiotism) rather than extending it to the social relations that, actually, restrict their capacity to act but, potentially, can be transformed. So actor 1 and actor 2, closed within their boundaries as they are, reproduce the antagonism without recognising, discussing or jointly referring to the actual limits given by the Third and its potential transcendence. They are opponents in a manifest conflict.

Basically, there are three measures to be taken to transform the conflictual relations. These measures taken are linked together in the same way as cognition, communication and co-operation are linked together, that is, they build upon each other and, in turn, require each other. The measures altogether orient towards the final replacement of the antagonism by synergism, while agonism is a necessary intermediary stage to reaching this goal.

Measure one is the extension of cognition (see Fig. 5.4). At least one actor transcends the limits of her restricted cognition and extends it to include reflexivity about the social relations she and her opponent are realising in their behaviour. By adopting a critical stance, by detaching herself from the role assigned to her by the antagonistic relations, by refusing to accept the position she holds as a plain negation of the opponent’s position, she can break out of the antagonistic behaviour and take unilateral action in advance. By doing so, she demonstrates that the antagonistic social relation cannot be maintained any more, since one side of the contradiction has been lost. The contradictory relation morphes into a contrary relation, the antagonistic one into an agonistic one. At least one opponent defies

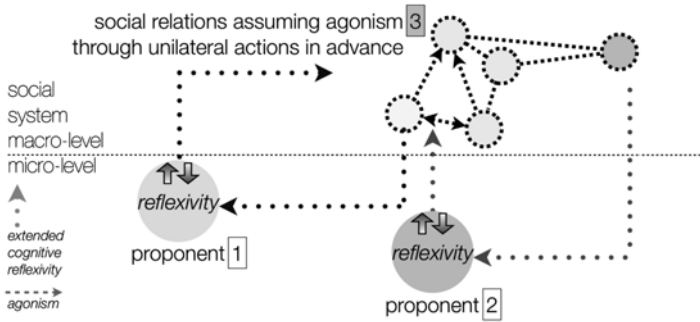


Fig. 5.4 Invoking agonism through extended cognitive reflexivity

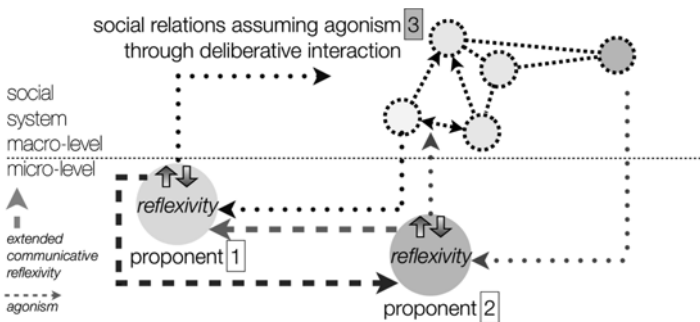


Fig. 5.5 Invoking agonism through extended communicative reflexivity

being irreconcilably opposed to the other, thus mutating into a proponent simply stating her position.

Measure two involves the extension of communication (see Fig. 5.5). As with cognition, at least one actor transcends the limits of her restricted communication. She configures an expression, refers to a content and appeals to a context all of which address the Third – the anachronism of the antagonism and the will to overcome it. By doing so, the metamorphosis of the antagonism into agonism may be reinforced. The extension of this reflexivity through communication is based upon a necessary extension of the cognitive reflexivity. The opponent may be instigated or reinforced to extend his cognition in response to the message from the sender and may act and interact accordingly as a new proponent.

Measure three is the extension of co-operation (see Fig. 5.6). As with communication, at least one actor transcends the limits of her restricted co-operation based upon an extension of reflexivity through communication which, in turn, overcomes the restriction of cognitive reflexivity. She individually shapes her contribution to some collective action so as to make it compatible with possible individual contributions of her opponent under the premise of the establishment of another kind of social relations. Her opponent can convert into being just another proponent. By doing so, agonism may be amplified and synergism may be one step away.

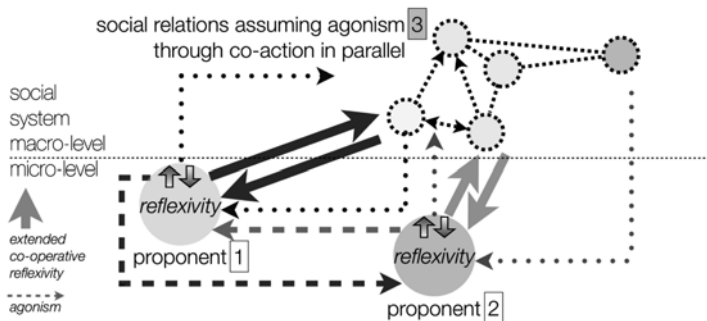


Fig. 5.6 Invoking agonism through extended co-operative reflexivity

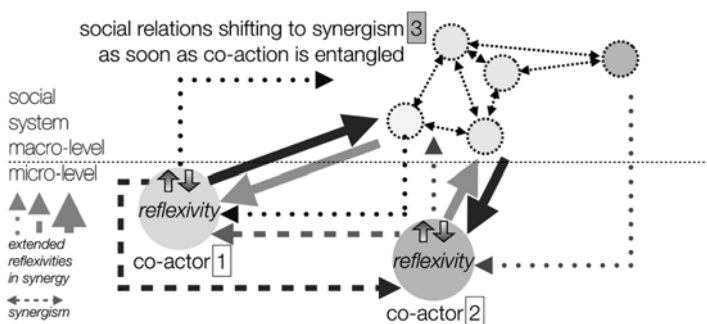


Fig. 5.7 Switching to synergism through entangling of extended co-operative reflexivities

As soon as both proponents agree not only to let their claims be co-existent but also to entangle their contributions so as to make them cross-fertilise and add to collective action, they may become co-actors (see Fig. 5.7). This means that actor 1 when interacting with actor 2 behaves according to the new relation that is jointly recognized between them, and vice versa. It can result in the ultimate shift from agonism to synergism. The character of social relations has shifted. Reflexivities lock in to synergy in all dimensions – the co-operative, communicative, and cognitive ones.

Synergistic social relations will prevail as long as reflexivities in cognition, communication and co-operation face no restriction (see Fig. 5.8). This composition of positions makes synergistic effects emerge (the commons), it is a constellation of identity and difference in which the relationships can dynamically be ordered according to the principle of unity-through-diversity: one’s behaviour is able to assure one’s difference without compromising the whole and thus the others’ differences are not compromised either. The differences, more than being merely compatible, consistently suppose each other, complement and complete each other. A gain for one co-actor is a gain for the other too because it is a gain for all. Eventually, antagonistic constraints have been replaced with synergistic enablers, the reproduction

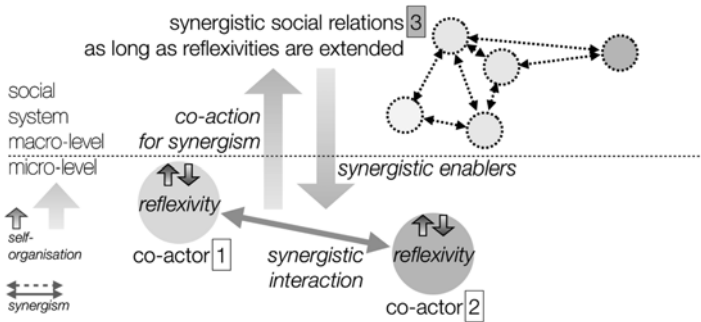


Fig. 5.8 Synergism

of antagonisms with co-action for synergism, antagonistic interaction with synergistic interaction, and the antagonists’ closure through restricted reflexivity with the co-actors’ openness to extended reflexivity.

The three measures delineated above need not be conducted in the sequence presented here. Rather, they mutually necessitate each other. Together they form a composite dynamism.

Such a dynamics as described here is difficult to implement and carry out with success. Given the predominance of structures that embody hegemony and the uneven distribution of power and wealth, evidence of successful applications is rare. However, there are more opportunities than expected prima facie.

A recent opportunity to implement such a dynamics that was missed was offered in the events surrounding Ukraine. At the beginning of December 2013, demonstrators spear-headed regime change because they favoured association with the European Union over association with the Commonwealth of Independent States, an alliance of former Soviet countries – two options inconsistent with each other to date. However, these two association agreements do not need to be mutually exclusive. Trilateral talks between Kiev, Brussels and Moscow could have elevated the contradictory positions to a meta-level on which they would have become compatible and even complementary to each other. Several international politicians, whether in office or not, advocated such a solution for a country “on the border”. Things turned out differently. A group not representative of the whole of the country seized power that, eventually, led to the secession of one part of the country and the integration of that part with the Russian Federation. Even Cold War rhetoric became reputable again.

Notwithstanding, there have been emergent opportunities as in the chemical weapons case in Syria or the nuclear issue with Iran. They need continuing efforts in order not to fail. Given the necessity of building a Global Sustainable Information Society, there is no other way than searching for those opportunities and grasping them.

“Mechanisms” are contingent dynamics; they are the cause of the advent of Information Society, they are the cause for the reproduction of Information Society, and they are the cause for its transformation into a “Morphogenic Society”.

References

- Archer, M. S. (2007). *Making our way through the world: Human reflexivity and social mobility*. Cambridge: Cambridge University Press.
- Archer, M. S. (2012). *The reflexive imperative in late modernity*. Cambridge: Cambridge University Press.
- Bloch, E. (1967). *Das Prinzip Hoffnung*. Frankfurt: Suhrkamp.
- Bunge, M. (2003). *Emergence and convergence*. Toronto: University of Toronto Press.
- Campbell, D. T. (1974). 'Downward causation' in hierarchically organized biological systems. In F. J. Ayala & T. Dobzhansky (Eds.), *Studies in the philosophy of biology* (pp. 179–186). London: Macmillan.
- Castells, M. (1998). *End of millennium*. Malden: Blackwell.
- Castells, M. (2001). *The internet galaxy*. Oxford: Oxford University Press.
- Castells, M. (2004). *The power of identity*. Malden: Blackwell.
- Castells, M. (2013). *Communication power*. Oxford: Oxford University Press.
- Corning, P. (1983). *The synergism hypothesis*. New York: McGraw-Hill.
- Curtis, N. (2013). *Idiotism*. London: Pluto Press.
- de Kerckhove, D. (1998). *Connected intelligence*. London: KoganPage.
- Donati, P. (2011). *Relational sociology*. London: Routledge.
- Floridi, L. (2007). A look into the future impact of ICTs on our lives. *The Information Society*, 23(1), 59–64.
- Floridi, L. (2010). *Information*. Oxford: Oxford University Press.
- Haken, H. (1978). *Synergetics*. Berlin: Springer.
- Hall, A. D., & Fagen, R. E. (1956). Definition of system. *General Systems*, 1, 18–28.
- Hofkirchner, W. (2010). A taxonomy of theories about ICTs and society. *Triple-C*, 8(2), 171–176.
- Hofkirchner, W. (2013a). *Emergent information*. Singapore: World Scientific.
- Hofkirchner, W. (2013b). Self-organisation as the mechanism of development and evolution in social systems. In M. S. Archer (Ed.), *Social morphogenesis* (pp. 125–143). Dordrecht: Springer.
- Hofkirchner, W. (2014a). On the validity of describing 'morphogenic society' as a system and justifiability of thinking about it as a social formation. In M. S. Archer (Ed.), *Late modernity* (pp. 119–141). Dordrecht: Springer.
- Hofkirchner, W. (2014b). Idiotism and the logic of the third. In M. Lakitsch (Ed.), *Political power reconsidered – State power and civic activism between legitimacy and violence, peace report 2013* (pp. 55–76). Münster: LIT Verlag.
- Holling, E., & Kempin, P. (1989). *Identität, Geist und Maschine – Auf dem Weg zur technologischen Zivilisation. Reinbek bei Hamburg*. Reinbek bei Hamburg: Rowohlt.
- Holzkamp, K. (1983). *Grundlegung der Psychologie*. Campus: Frankfurt am Main.
- Horkheimer, M., & Adorno, T. (1969). *Dialektik der Aufklärung*. Frankfurt am Main: Fischer.
- Kauffman, S. (1993). *The origins of order*. Oxford: Oxford University Press.
- Marx, K. (1852). The eighteenth Brumaire of Louis Bonaparte. <http://www.marxists.org/archive/marx/works/1852/18th-brumaire/ch01.htm>. Accessed 31 Mar 2014.
- Marx, K. (1894). Capital, Vol. III. <http://www.marxists.org/archive/marx/works/1894-c3/ch48.htm>. Accessed 31 March 2014.
- Mouffe, C. (2013). *Agonistics. Thinking the world politically*. London: Verso.
- Tudyka, K. P. (1973). *Kritische Politikwissenschaft*. Stuttgart: Kohlhammer.
- von Bertalanffy, L. (1950). An outline of general system theory. *The British Journal for the Philosophy of Science*, 1(2), 134–165.

Chapter 6

Body Captors and Network Profiles: A Neo-structural Note on Digitalized Social Control and Morphogenesis

Emmanuel Lazega

6.1 Introduction: Social Digitalization

‘Social digitalization’, as an indicator and substantive part of contemporary social morphogenesis, can take complex forms. This chapter examines the process using two combined indicators that will be called “devices”. Firstly, the global spread of body sensors/captors, as new and invasive technologies originally designed by an alliance between scientific and military establishments, which are now fostering measurement, industrialization and commodification¹ of the body. And secondly, the construction of very large relational databases, bringing together information about individual relational networks and leading to exploitation of individual profiles for both commercial and political purposes. In such social changes, businesses and markets, large and small, find ingenious ways to transform these devices into marketing opportunities and to make this combination of technologies acceptable to diverse kinds of publics by linking them with widespread concerns (health, security) and activities (games, sports). At some point, a critical mass will be reached with the use of these tightly knit technologies in specific sub-populations whose diffusion is likely to change our social reality: in particular social control as we know it. My hypothesis is that this social digitalization will create the digital equivalent of a company town at the global level, an integrated self-contained social

¹ These terms mean that reactions of the body to all sorts of stimuli coming from commercial products (for example digital games) become part of an industrial process that measures these reactions in very intrusive ways, changes these products based on deep knowledge on individuals and groups acquired by these measurements, and creates products with addictive power over the persons and their behaviour (Dudouet 2009). The measurements are carried out on a continuous basis and the body thus becomes a thing that is part of the Internet of Things.

E. Lazega (✉)

Département de Sociologie, Centre de Sociologie des Organisations,
Institut d’Etudes Politiques de Paris (Sciences Po), Paris, France
e-mail: emmanuel.lazega@sciencespo.fr

ecosystem to limit welfare protection (where it exists) as well as both political and institutional entrepreneurship.² Both are likely to become conditional on accepting this digitalized form of social control and its consequences.

Social morphogenesis and contemporary neo-structuralism together help theorize these intertwined and emerging processes. The morphogenetic approach uses an analytical framework that emphasizes the interplay between three dimensions always at work in any social transformation: ‘structure’, ‘culture’ and ‘agency’ as the basis for explaining stability or change (Archer 1988, 2013). Neo-structural sociology³ is defined here as an approach that makes the same analytical distinctions while using network analyses, combined with other methods, to enrich theories of individual and collective action. It does so by modelling generic social processes such as solidarity and exclusion, control and conflict resolution, socialization and collective learning, and regulation and institutionalisation, based on specific definitions of reflexivity, contextualization and judgements of appropriateness⁴ (Archer 1979; Lazega 2003, 2012).

In particular, neo-structural sociology is concerned with understanding the concept of social capital as encompassing these social processes and helping collective actors manage the dilemmas confronting their collective actions (Olson 1995). Social capital can be considered to be a collective asset different from the relational capital of individuals. For example, observing that a group is characterized by a particularly high level of indirect reciprocity (among its members) raises the question of what makes such a form of solidarity possible. The answer to this question is to be found by looking at the economic and symbolic kinds of relationships that are mobilized in processes of generalized exchange: at the boundaries that the group has established for itself, based for example on exclusion(s), and at the norms that its members are called upon to define and apply (Favereau and Lazega 2002). A group’s social capital may therefore be conceived as a product of members’ “political” activity in combining structure, culture and agency. It is not merely the by-product of interactions among actors who instrumentalise their relations⁵ in order to accumulate resources of the sort individuals can appropriate.

All types of collective action are based on multiple social processes that compose these variable types of “social discipline” or social order perceived as legitimate by the group. Among such processes that can be considered to represent a form of collective social capital, one generic process consists in informally organized

²As used here, this notion of institutional entrepreneurship does not imply a heroic and glorified conception of political activity.

³The prefix ‘neo’ is meant to differentiate this brand of structuralism from that developed in France between the 1940s and the 1960s, for which individual and collective agency did not matter much in explanations of social phenomena. A neo-structural perspective looks at collective action process by process.

⁴For early use of the notion of judgments of appropriateness to specify behavioral responses rather than assuming their uniformity, see Archer (1979, 2012) and Lazega (1992).

⁵The idea that the social order only “emerges” from interactions between members of a group has a long history in sociology. In sociology of organizations, see for example Strauss (1978) and a critique of this approach (Lazega 1992).

social control among members. I separate social control from other processes for analytical purposes only, for it is inseparable from a shared, underlying form of social discipline that includes these social processes feeding back on each other (socialization, solidarity, regulation, and many others). Faced with deviant behavior or behavior perceived as opportunistic by a dominant class or by dominant members of a group, and before turning to costly solutions that invoke the legal system to enforce the rules, a group or a community mobilizes its internal relational system of social control. Most of social control taking place in society uses relationships and happens before police and the judiciary come into the picture. This relational system enables everyone to participate in imposing sanctions and to construct personalized access to infractors to bring them back to good order, i.e. to respect their commitments or taken for granted customs and norms. This process “resolves” the problem of the “second-order free-rider” by lowering control costs through harnessing the personal relationships between sanctioners and infractors (Lazega 2000). This is why social control is usually examined as a widespread social process of collective action bringing together the basic elements of culture, structure and agency by looking at networks of relationships between members, sanctioners and infractors.

The argument here is that this is precisely what social digitalization weakens. Control can be exercised laterally at the intra- and inter-organizational levels, using relationships instead, backed up by more formal procedures. But, paradoxically – given their intrusiveness with respect to personal information – captors strengthen only asymmetric top down and bureaucratic, impersonal controls. Industrialization/digitalization of the body and the spread of captors weaken control regimes based on the management of relationships. The danger of a captor-based authoritarian order spreading in civil society via health, security and gaming technologies is based precisely on the fact that monitoring and sanctioning are no longer relational.

This combination of approaches is useful when looking at contemporary societies as organizational societies, i.e. as social worlds in which the meso level, a generic level where micro and macro evolutions take place, is overdeveloped. As shown by Philip Selznick, power in such societies comes from the ability both to use organizations as ‘tools with a life of their own’ and live with them as institutions and mesopolitical communities. Building upon the Weberian tradition studying modernization, rationalisation and bureaucratisation, many sociologists – including Perrow (1991) and Stinchcombe (2001) – specify this notion of organizational society by looking at how organizations have absorbed societal functions and spread formalized and managerialized coordination, thus subjecting individuals and each other to tightly connected constraints and strong demands for increasingly close coordination.

The ‘transformational capacity’ of these technologies depends upon the users (i.e. those who occupy privileged positions in social hierarchies) and the organizations in question (the military, police, marketing firms). These organizations can be narrowed down to focus on the State (and its coercive organs) and market agents (e.g. large multi-nationals) – the stick and the carrot. It is also necessary to underline how the acceptability of such technologies is lubricated by the fabric of neo-liberal

economics, which translates such technologies into commodities to be bought and utilized as tools, thereby masking their inherent transformational capacities and their potential for undermining existing means of deliberative collective action. Another dimension would actually be the welfare dimension, where diffusion is aided by perceptions of the good or misperceptions of their capacity for harm (if the harm principle is the ethical principle determining social acceptability).

6.2 Sensors and Networks: Technologies of Social Control Reconfiguring Late Modernity?

Relational monitoring and sanctioning is being steered and channeled by new and combined use of technologies of social control. These technologies could be considered to be cultural/structural indicators of generative mechanism(s) reconfiguring late modernity. One possible illustration, out of many, of the emergence of new forms of social control in current societies can be found in the spread of two measurement devices. The first is the relational profile of individuals identified and measured by his/her ego-network. The second is an ‘epidermal electronic system’, a sensor recording neuro-vegetative variables of the body. Both are pictured below in Fig. 6.1.

Sensor technology is global. It was developed in the USA, China, Singapore and probably several other countries for military purposes and business competition. Industries using such sensors include the military, healthcare, gaming, sports,

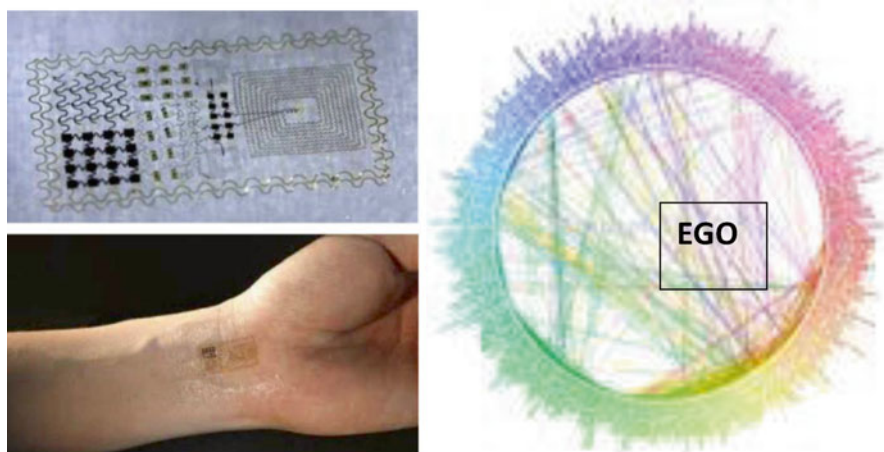


Fig. 6.1 The “epidermal electronic system (EES)”, (Dae-Hyeong Kim et al. *Science* 333, 838 (2011)) and ego-network relational profile (as in ordinary visualizations of Facebook or Gmail profiles, to use brand names that are familiar to many in 2014)

building, insurance, surveillance and security, even education.⁶ The devices come from the efforts of biological and medical research to measure and quantify the human body. They now measure much more than glucose levels for patients with diabetes. They monitor body temperature, brain activity, voice, heartbeat, muscular activities, and many other variables as part of body “augmentation” schemes. Intelligent captors are incorporated in watches, clothes, floors, fridges, in the apartments of persons with Alzheimer’s⁷ and ordinary “smart flats”. Their goal is to quantify and follow human behaviour on the ground, in its environment, and characterize the sensory-motor, biological and psychological profiles so as to keep all citizens in good health by detecting their pathologies early on, help the young and less young learn at school, assist everyone with complex tasks at work, personalize the treatments of the elderly, etc.

Use of these sensors/captors is also part of a new kind of behaviourism that tries to use and guide human reflexivity and judgments of appropriateness in the orientation of action. Their economic cost has decreased so much that biomedical and epidemiological research uses it to equip not only ‘high-maintenance cohorts’ of soldiers on the battlefield or high-level athletes, or those with post-traumatic syndromes, burnout and depression, but also representative samples of the population or clients of specific services (travellers on long flights, adolescents playing online games, etc.). The definition of ‘high maintenance cohorts’ is being relaxed to include patients with neurological troubles, psychiatric patients, patients in depression or re-education, senior people in general, handicapped persons, but also groups that are temporarily in situations of pressure, vigilance, anxiety or immobilisation, such as long-haul air passengers. It is obvious that cultural changes are on their way that will make it acceptable to extend the use of sensors from ‘high maintenance cohorts’ to the entirety of civil society. Statistical analysis of such data will identify intra- and inter-individual norms just as much as they will direct their users towards “personalized” treatments and closely monitor patient adoption of these personalized treatments. Long term follow up of such cohorts over decades was launched in various countries and is added to their databases on a regular and continuous basis.⁸

These efforts aim to construct very large databases combining, for each individual, biological (genotype and other), medical, psychological (based on questionnaires and interviews), behavioural and socio-demographic variables, plus network profiles

⁶For an illustration of the circular relationship of technology transfers between civil healthcare, the defence industry and academic scientific laboratories at the global level, see Ian Sample & agencies, ‘Soldier controls bionic arm using power of thought, *The Guardian UK* (11 Dec, 2013) [<http://www.theguardian.com/science/2013/dec/11/soldier-controls-bionic-arm-using-power-of-thought>] (Accessed 13 December 2013).

⁷The novelty of this technology should not be overstated. This technology is continuous with the appeal of “self quantification”, as with equipment such as joggers’ bracelets or use of smartphones to track people; an existing mode of being in the world that has become normalized. The tools may be new but the practices are already entrenched and they fit into a ground that is already prepared.

⁸See for example Zhengming Chen et al. (2013) on a longitudinal cohort of half a million persons in China wearing these captors for months.

and activities tracked by Global Positioning System (GPS) and Radio-frequency identification (RFID) chips that are deemed to be key for everyone's "maintenance" as biological and cognitive machines. Projects are extended to include measurements of "emotions" and collective reactions of workgroups and teams, so as to ensure "harmonious" functioning of the team by managing the turnover of its members and their collaboration. Analyses of databases bring together applied mathematicians, computer scientists, engineers, medical doctors, epidemiologists, and representatives of human and social sciences. Questions such as "should these databases exist?" and if so "Who does or should control them?" are of some economic and political importance. Right now, the most popular global corporations, email operators and semi-conductor and gaming industries master biofeedback much better than public services and do so worldwide.

6.2.1 Marketing Fear, Fun and Social Comparisons

Combined captor and network profiles, their diffusion and their databases can be considered part of the contemporary 'exponential addition of new items, novel sources of ideational variety' illustrating the situational logics of both structural competition and cultural opportunity, thus redefining the relation between culture and structure in Late Modernity (Archer 2013). The most obvious vector of diffusion for bodily devices and ego network information (and their associated databases) is the neo-liberal market with large private actors who do what they want, supposedly with good public intentions but also with weak regulators. At least three models already exist in internet commerce for how this equipment is advertised, marketed and legitimized. Firstly, through reductions in transaction costs that are offered for buying goods online if the consumer fills in all the required information and accepts the cookies, thus trading information for reduced purchasing price. In the case of sensors, the message might be "If you have this chip, your health insurance premium will be reduced".⁹ Secondly, another way in which this monitoring equipment will spread is the promise of security coupled with the propaganda of fear. Fear and security are among the most powerful motivating feelings used for gaining access to private information for control purposes. Especially in an era of diminishing State authority and power, large private oligopolies (in the industries mentioned above) and smaller entrepreneurial companies at the fringes of these oligopolies will work to increase the social acceptability of these technologies and spread them in civil society as tools of 'governance', if not 'self-governance'. The third model for the diffusion of these technologies is the provision of increased capacity to make systematic and personalized social comparisons. Building relational

⁹This kind of contract is already in place in many countries and sectors of the economy. For example, in Italy, the law rewards drivers who agree to install a black box in their car for a reduction in their insurance premiums.

profiles leads individuals to link fear and fun, protection and pleasure with the selection of alters, i.e. to rationalize their differences in terms of social niches and social status.

These techniques “introduce new variety” in social control and “encourage still greater variety” (Archer 2013) in that same process. Their joint diffusion can be seen as a case of “culture and structure in a mutually morphogenetic relationship”, i.e. the potential for “changes in culture that amplify those in structure and vice versa through positive feedback” and marketing. The extent to which civil societies, whether national or ‘global’, will be able to resist the spread of these combined technologies of social control and the development of these databases on behalf of freedom and human rights remains to be discovered. There are consumer accounts of these technologies in contemporary self-quantification practices and movements that accentuate and play upon a gentle, ‘gamified’, and participatory dimension in social control, one that argues that it is liberating people from frustrating problems through newly acquired knowledge. There is an element of massive individual and collective participation in this process of social control found in the fact that we expose ourselves, whether through narcissism or simply as a labour market strategy.

Michel Foucault’s concept of governmentality can be useful here. With such devices, which are part of a chain of permanently redesigned and nested instruments of “biopowers” and “sanitation” of various populations, the State, but also collective actors and institutions of all kinds participate in the production of knowledge, norms, and practices, i.e. the government of conduct and the ‘general economy of power’ that adapts its devices to what the governed themselves consider reasonable and rational (Foucault 2002; Foucault and Senellart 2008).

The morphogenetic character of these technologies might thus lie in their potential as slippery slopes: the more sensors and profiles spread together, the more different technologies must continue to exploit ‘contingent complementarities’. The cluster of institutions that makes up the social structure surrounding these technologies at the meso level is then enriched by markets, i.e. private businesses that will find creative ways for making them acceptable to almost everyone.

6.2.2 Cultural Acceptance of Conditional Access to Welfare

At this stage of the analysis, we need a better sense of how the use of these combined technologies on the part of individuals and organizations leads to the potential transformation of the organization of users by these technologies. The paradox of these new technologies is that they can be used for ends for which they were never envisaged. Supermarkets started accumulating information about each individual several decades ago, and they deploy it for all sorts of purposes. It thus began to become culturally accepted that this information should be accumulated. We have a crisis of faith when this information comes closer to the body, but we are culturally prepared to accept the payoff (as in Zelizer 1979), the comfortable and productive

side of technology. Trust and naiveté about what can be done with this information are already culturally constructed even if we have not yet seen all the consequences.

Considering different forms of social control that are relevant in social relations, cultural change that works through relationships¹⁰ can drive real morphogenesis, reshape attitudes, goals, and behaviour. There is a marked contrast between cultural change in which people are immunized from social relations and cultural change where people have to deal with social relations. Indeed, showing that relationships can be at stake when bringing others back to good order or when changing the rules of the game is very different from situations in which social control or cultural change happen independently of these relations. As Pierpaolo Donati maintained at the Workshop, captors may immunize people from social relations and culture that is not intrinsic to social relations. This is highly conducive to conformism. Soldiers conform to a cultural model embodied in the captor.

6.2.3 Hardwired Controls Undermining Bottom Up Institutional Entrepreneurship

Individuals can look at their own network profile or at profiles of their friends, but cannot reconstitute “communities” and organized social movements that are created by the concatenation of these profiles, i.e. they lack the capacity to zoom in and out of social networks that are the carriers of collective action. Today, a private company such as Google not only certainly has this capacity but is almost the only organization in the world that has the data to preside over the whole process at a global level.

Aggregation of information on individuals helps current powers to make individuals transparent in relevant (manipulative) respects (Lazega and Prieur 2014); it is therefore important to ask whether or not this form of social control decreases the possibilities for individuals to become institutional founders, players or leaders. At each level, agency is rife with various forms of both structuring and destructuring effects through intertwined social processes feeding back on each other: continuous reproduction and changes in horizontal and vertical social differentiation (hierarchy and status, division of work and role sets, for example) facilitate or hinder generic social processes listed above (Sect. 6.1).

This reflection on the use or possible misuse leads to the question of their regulation, in particular in the context of scandals such as that of the American National Security Agency, and thus to the design of adequate regulatory institutions. It is important to identify the conditions under which the technology is developed, its uses and diffusion mechanisms, but also the question of the slippery slope with

¹⁰ See for example the case of a ‘lateral control regime’ among rival peers exercising early monitoring and sanctioning through appropriate use of their own relationships to choose sanctioners who are relationally close to the infractors (Lazega 2000).

respect to the impossibility of anonymizing the data.¹¹ Big Data – one of the most recent and powerful tools bureaucratization – collects large and dangerous amounts of information on individuals, and this information acquires market value for various powerful private operators. American marketing operators, for example, challenge the applicability of European protections of datasets by arguing for their “anonymity”, in which European institutions do not really believe, especially when the data is so precise that people can be directly or indirectly recognized – based on information that they themselves gave away. How are large databases constructed? Under what constraints? Are they proprietary? Owned by whom? Built with what kind of consent? Stocked where? Sold to businesses? Destroyed or accessible for secondary analyses? If accessible, to whom? These questions prompt legal, ethical, and political reflections.

6.2.4 Consequences at the Societal Level

But the implications of participation, especially at the collective level, in what Foucault called ‘secritarian’ societies, are quite different from what individuals seek to do at the individual level. Even if self-quantification is about identification of people’s needs (as some doctors argue) by people using these devices and giving away their data, there are ways in which these databases are less useful to meet needs than they are for social control purposes. Given the intrusive yet participatory character of these technologies of social control and the role of markets, how would their emergence and spread reconfigure late modernity? The hypothesis formulated below is that these tendencies can have at least three consequences that can be measured only if society is understood to be an organizational society, i.e. a multilevel context in which vertical differentiations at the meso level between individuals and organizations have become crucial. My argument will be that the three effects that are derived from the combination of data from hardwired controls with data from relational profiles are the following.

The first is to help elites in public and private organizations issue new rules (i.e. culture) that demonize certain kinds of behaviour (the most obvious example being smoking) and condition access to welfare with conformity to these rules; sensors will monitor and test in conformity to these rules, relational profiles will help make conformity a social selection criterion, and markets will make the combination of both sensors and network profiles acceptable to individuals. The second will be that relational profiles and derived “community detection” will track those types of mobilization and institutional initiatives and practices that are likely to challenge these rules and possibly reduce their capacity to reorganize behaviour in the interests of control. Institutional management, being intrinsically multilevel, means that tracking will be both individual and organizational. Thirdly, since technologies are

¹¹ When people are reduced to an object of research, they are necessarily exposed. One well known example is the case presented in Rebecca Skloot (2010), *The Immortal life of Henrietta Lacks*.

used by elites with control of organizations, the transformation that they will create will benefit those who control these organizations; they will do so by shifting social synchronization costs between levels “downwards” in terms of social stratification, thus increasing inequalities. Synchronization costs include energy and efforts invested, mostly by individuals, to adjust to requirements by the organizations in which they are affiliated, in terms, for example, of repeated secondary socializations, participation in costly forms of solidarity and control schemes designed from above, or even in forms of regulatory competition in which normative choices by individuals are pressed to align with that of the organization.

Cultural changes (normative) and structural changes (profiles and communities) will thus co-evolve with sensor implementation, redesigning social control at both individual and organizational levels so as to monitor enforcement and strengthen the elites. The spread of such technologies of social control threatens to reconfigure late modernity (1) by weakening the capacity of individuals and groups to act as institutional entrepreneurs to change their institutions, and (2) by redistributing the cost of control ‘downwards’ in terms of social stratification, thereby increasing inequalities. Before linking body captors and network profiles to each of these consequences, however, it is necessary to look at the multilevel dimension of social control technologies, and thus sketch a multilevel account of morphogenesis itself.

6.3 Multilevel Logic, Social Control and Morphogenesis

Empiricism and empirical evidence alone cannot demonstrate social morphology, for it cannot inherently express any causal mechanism that applies here: the combined technologies by themselves cannot be the ‘cause’; they can only be such if they are put to use by individuals and organizations. From a neo-structural perspective on organizational social forms, the logic of the spread of this technology and the social control process implemented with it, is multilevel. It can be derived from the dynamics of networks at both levels of agency: individual and organizational. To track the two, it is useful to reframe the question “how do systems change?” by asking “how do systems change at each level of agency?” and “how does change at each level of agency influence change at the other levels?”. The dynamics of ‘diffusion’ require a ‘top-down’ and ‘bottom-up’ account. Technology transfer is both an organizational game and a process dependent upon the individual (scientific or engineering or business) entrepreneur. The latter’s ability to build intermediary level entities (such as stable workgroups) or (new) organizations to hoard the opportunities¹² offered by structural positioning and cultural diffusion of knowledge is intrinsically multilevel. The institutional entrepreneur as official (“bureaucrat”)

¹²the notion of organizations as ‘opportunity hoarding’ tools as introduced by Tilly (1998) following his discussions with Harrison White who used networks as measurements of structures of opportunities and constraints.

acting at the organizational level and the institutional entrepreneur as individual opportunity seeker might even be dual roles played by the same individuals performing several functions in recursive organizational processes.

The social reality that we observe is relational, multilevel, and dynamic.¹³ In it, institutional management entails multilevel collective action. As each level constitutes a system of agency, in which interdependencies are managed (as in “managerialized”) by exchanges of various resources, it is also necessary for sociologists to examine these levels of agency as part of the same social system.¹⁴ In terms of datasets, it is possible to do so by using the specific format of “linked designs” (Lazega et al. 2008, 2013; Wang et al. 2013) so as to avoid upwards or downwards conflation, reducing actor to structure or structure to action (Archer 1982) and leading to the denial of either actor’s freedom or the constraining power of structure (Archer 1995). Here the causal emergent properties of both structure’s and actor’s influence are recognized. This is possible by assuming that institutional entrepreneurs are actors who use the causal powers of pre-existing structures to create new organizations or institutions, or challenge existing ones (Leca and Naccache 2006; Lazega 2014). There is little agency of that kind in the organizational society that does not use organizations as “tools with a life of their own” (Selznick 1949), which can either reproduce these structures or change them. To change them they go beyond existing routines by reaching out to relationships leading to new recognition and resources. By doing so, they can try to use the causal powers and logics of both competition and opportunity (Archer 2015).

The skills with which organized actors use institutional logics to change institutions, to influence the evolution of other institutions or to create new ones include, among others, the capacity to exercise social control, i.e. monitoring and sanctioning of others both as managers of resources in their current organization, as opportunity seekers beyond its boundaries and opportunity hoarders in their new organizations. This is true at both the inter-individual level and at the inter-organizational level (Lazega 2014).

¹³For example, in the situations of cooperation among competitors examined by economic sociology, coordination tends to rely on relational investments that are channeled into relational and personalized substructures facilitating this cooperation – even when entrepreneurs wait for opportunities to behave opportunistically. Without this social exchange, coordination of collective action among competitors would be much more costly, if not impossible. Such relational structures are complex, multilevel and sometimes unstable. A clear analytical distinction must therefore be made between networks of entrepreneurs (persons) and networks of companies. A clear articulation needs also to be reconstituted between the two levels (Lazega et al. 2008). The meso level forces members to perceive the coevolution, over time, of actors’ strategies and opportunity structures as represented by their multilevel networks. In effect, if the games that actors play restructure their immediate environment, new constraints emerge on the options and behaviors of these actors. The conditions of stability of these structures constitute one of the most difficult questions for a meso-sociology (Lazega and Mounier 2002; Lazega et al. 2006).

¹⁴For neo-structural sociology, Archer’s (1995) “stratified ontology of the social order” is a natural: “Each stratum is activity-dependent on that or those beneath it and that downwards causation and upwards causation are continuous and intertwined”.

At the inter-individual level, social control is relational, i.e. used, for example, for the protection of common resources against free-loading, by pressuring members of social groups back to good order by utilizing their relational influence. Forms of collective responsibility are often challenged by the recognition that some members neglect their commitments, while still deriving *de facto* benefits from sharing common resources. Enormous amounts of self-policing to enforce rules and commitments in social life (in the family, at work, in the community) take place at the inter-individual level. Social life provides relational paths for lowering the costs of such controls. The existence of such paths and pressures was explored by research on the organizational efficiency of social control as depending on the quality and configuration of interpersonal relationships between members (Lazega 2000). The social structure of collective responsibility gains quasi-voluntary compliance by spreading the relational control costs among members, thus organizing collective responsibility and renewal of solidarity in delicately constituted communities or institutions. But relational leverage at the inter-individual level disappears with the centralization of controls and the bureaucratic use of big data, remote surveillance and captors at the organizational or inter-organizational or inter-organizational level.

At the inter-organizational level, control operates through formal governance arrangements, such as contracts or hierarchy, but also through social and relational mechanisms closer to spying and hostage taking. Exchange partners in markets, for example, can use reputation (Raub and Weesie 1990) and embed commercial transactions in social attachments and networks (Granovetter 1985, 1994). Control depends upon social embeddedness and relation-specific investments between organizations. For example, issues of conflict resolution in markets can be framed in terms of formal external control over organizational life (Hawkins 1984; Reiss 1984; Shapiro 1984; Vaughan 1983), but also in terms of more informal mechanisms such as reputation and ostracising (Macaulay 1963) or private arbitration (Dezalay and Garth 1996; Lemerrier 2007). Both formal and informal processes help interdependent managers to monitor and sanction each other before resorting to well-defined but costly court procedures (Cheit and Gersen 2000; Dunworth and Rogers 1996; Macaulay 1963; Rooks et al. 2000; Lazega 1994, 2001).

Mechanisms based on embeddedness are weakened when control as a local process at the inter-individual level is carried out, at least in part, by businesses at the inter-organizational level using centralized and impersonal monitoring (and possibly sanctioning) based on electronic captors and network profiles. Sub-structural regularities in relational life (forms of direct and indirect reciprocity, for example) are no longer needed for that purpose. This does not mean that meso and macro level processes weaken interpersonal processes at the ground level so much that they disappear entirely. Indeed, the essence of 'networks' is to help actors cut across predefined organizational boundaries to create new relationships (Baker 1992; Lazega 1992), identify new opportunities and, eventually, create new organizations to use or hoard these new opportunities (Tilly 1998; Lazega 2012). Breaking barriers to create inter-individual ties with people on the other side and thus to recreate new barriers is not necessarily a form of disloyalty to the current affiliation. In many cases it is a way to reach out to "dual alters" (Lazega et al. 2013) with the help of their employers or

‘embedded brokerage’ by hierarchical superiors, senior family members, association managers, professional brokers, etc. and by the complementarity of the resources provided at both levels. But the issue raised by social control via captors is not only that of individual freedoms. It is also the issue of the ability of institutional managers to act at both levels at once, to keep changing their organizations, or to mobilize to recreate new ones. The transfer of technology from science labs to military equipment to hospitals to markets, with the help of cooptation removing regulatory and legal obstacles, might be the mechanism accounting for the spread of this new technology and the transition from one regime of social control to that of late modernity precisely because it undermines institutional management and collective activity.

Indeed captors/sensors combined with network profiles strengthen only asymmetric top down controls by organizations that collect, analyse, and react based on these datasets in a bureaucratic way. Their combination should weaken the capacity of institutional managers to change their institutions, including in the production of common goods as relational goods of the commons whose maintenance reflects concern for the whole (Donati 2011). With this bodily technology, control mechanisms as part of social discipline could represent the danger of totalitarian order spreading in civil society through health, security and gaming techniques. Making some people transparent to others, and not the other way around, is not new, but here it reaches a level of sophistication and organization that represents a threat to the public sphere and democracy as much as a threat to individual privacy.

The spread of the two combined technologies from science labs to battlefields, hospitals, workplaces, and households makes this morphogenetic process a slippery slope.

6.3.1 Hardwired Controls Shifting Social and Synchronization Costs “Downwards”

Why bother measuring all this and combining the morphogenetic approach with neo-structuralism? Empirically, to develop contemporary knowledge of the meso-social level is based on a research program focused on the co-evolution of interdependence systems of individuals and organizations, at the different “floors”, layers or strata of social reality. Coordination at each level and across levels is based on all the ingredients supplied by collective agency, as long theorized by sociology: boundaries, resource interdependencies, formal power, division of work, etc. But this co-evolution is not well understood: what are the effects of evolution of one level on the evolution of another? In particular, what constrains the co-ordination of these evolutions in economic and social reality? If each level has its own temporality, one issue is “who shall pay for the costs of synchronization?” Separate dynamics at different levels of analysis raises new research questions about invisible effects of agency at these different levels.

One can try to measure the social costs hidden in the operations of these systems by focusing on the efforts of adaptation at one level to the dynamics of the ‘other’

level (costs of adjustments to the dynamics of inter-organizational networks for individuals and efforts of adaptation to the dynamics of inter-individual networks when looking at this phenomenon from the perspective of the management of the organization). It is particularly revealing to look at the relationships between networks and mobility in individuals' careers when they belong to these organizations (Lazega et al. 2012). The making and unmaking of careers at the intra-organizational and inter-individual levels is one powerful such device. Violence in contemporary labour markets does not come only from brutal layoffs and exclusions, but also from requirements generated by mobility in relation to blind bifurcations, rapid adjustments, cascading forms of secondary socialization, serial successive and temporary 'commitments', etc.

Mutual adaptation between the evolutions at each level of social reality (for example inter-individual and inter-organizational networks) may happen through the relational adjustments and turnover required by mobility and the increased flexibility of labor markets. If different forms of adjustment exist, costs that are invisible generate still further inequalities that are almost always incurred by individuals, rarely by the organization and by the elites using them as 'tools with a life of their own'. The need for synchronizing evolutions is found at each level of social reality, for example, in the relational adjustment required by mobility within professional careers. This co-ordination is achieved in part by the contemporary functioning of flexible labour markets, where the costs and benefits of adapting business to individuals – but more frequently of individuals to enterprises – are most easily transferable to the weakest. These adaptations and their invisible costs, are almost always the responsibility of individuals and rarely that of the organization and are still badly measured. Combining hardwired controls with relational profiles is also a way for preparing the dumping all these invisible costs of synchronization on the weakest individuals in society.

6.3.2 Towards Neo-structural Modelling of Morphogenetic Slippery Slopes

Thus see all the consequences of these combined technologies on generic social processes such as social control, measurements and models of the dynamics of multilevel forms of collective agency must become part of sociologists' methodological toolkits. The coevolution of activities such as making rules, monitoring enforcement, choosing/selecting your friends, steering collective action related to these rules, managing turnover in one's personal network and participation in collective action, is intrinsically multilevel. Indeed the logics of opportunity and competition operate in stratified contexts and the morphogenetic slippery slopes can be modelled by these dynamics of multilevel networks. The evolution of relational structures at each level will help understand recursive social processes feeding back on each other to contribute to the emergence of new social orders.

To work at a higher level of abstraction and generality and transform these questions to make them tractable, we need to reframe the question "how do systems

change?" by asking "how do systems change at each of their levels of collective agency?" and "how does change at each level of agency influence change at the other levels?" This means finding the main determinants, at one level, of changes at any other level. Evolution of each level must be examined jointly and separately with the evolution of the other strata because these other levels provide explanatory variables for people's management of relationships. Problems of co-ordination or synchronization between levels arise, for example, as in orchestral music, and it is worth measuring them because both are high and hidden, especially in a society where individuals often move from one organization to the other and have to experience many successive forms of secondary socialization (Lazega 2014).

For example, Berends et al. (2011) have attempted to understand the coevolution of two partly nested levels through attempts by actors from each level to orient themselves to the structure at the other level in terms of sequences of maintenance, creation and dissolution of ties (at the dyadic level). The inter-organisational level is measured by agreements and contracts between firms; the inter-individual level is measured by collaboration, advice and friendship ties within organizations and across organizations. They differentiate between five phases of interaction between levels (contacts and contracts): (1) Persistence: in this phase, contacts outlast contracts, and inter-individual relationships can live on without inter-organizational ones. (2) Prospecion: in this phase, contacts build contracts, and inter-individual relationships build inter-organizational ones. (3) Consolidation: in this phase, contracts build contacts, as inter-organizational ties build inter-individual relationships. (4) Dissolution: in this phase, contacts end with contracts, and relationships at both levels are broken. (5) Reconfiguration: in this phase, contacts change contracts, and inter-individual relationships transform inter-organizational ones. These phases can be articulated in very different sequences accounting for multilevel structures in action. Building on similar intuitions, models must introduce superimposed networks in these multilevel dynamics.

Minimally, statistical analysis aims at displaying the morphology of the networks at each level to examine the extent to which they are different, but also to show that the context of relationship creation, maintenance or dissolution of relationships is different for each level. This morphology can be influenced by various kinds of structural positions and actors' attributes (Porpora 1989; Brailly et al. forthcoming). Statistical models can deconstruct this new process of social control to test hypotheses about it. This can be done by proposing a multilevel extension of Snijders model (Snijders 2001; Snijders and Bosker 1999) of the dynamics of networks in which dynamics of alignment and synchronization are equivalent to co-evolution of behavior and position at micro and meso levels. This model specifies both endogenous and exogenous factors as driving network evolution, i.e. the creation of new relationships and also the co-evolution of actions and relationships. In the linked design model (Brailly and Lazega 2012; Lazega et al. 2008), this means that, at each level, both exogenous and endogenous factors contribute to the evolution of the structure. This model uses the characteristics of level 2 networks as a set of exogenous factors in the evolution of level 1 networks, and vice versa. Characteristics of each level can thus contribute to upward and downward causation (Archer 2013; Lawson 2013). Each level thus contributes to the coevolution of behaviour and relational choices at the

other level without conflation, by adding specific variables as exogenous effects. In model specification, new ‘independent’ variables can be derived from inter-organizational networks impacting at the inter-individual level, and vice-versa. Co-evolution of relationships is measured at each level as a function of three sets of factors: same level endogenous factors, same level exogenous factors, and other level factors counting as a new category of exogenous factors. Over time, levels can evolve in a way that strengthens their alignment in a hierarchy, or in a way that weakens this alignment. Upward and downward causation feed on each other.

To use the vocabulary of multilevel network analysis, we can hypothesize that the more control is asymmetrical, the more exogenous pressures from above become systematically stronger than endogenous mechanisms on the ground. Bottom up pressures can also be exercised from the ground floor on the upper-level, but with much less efficiency. Synchronization as upward or downward participation in same level processes, such as control, is turned into a unidirectional downward process. Exogenous effects are never homogenous, and the existing form of social stratification rarely allows lower level strata to influence what happens at the upper echelons. But, here, the hierarchy of effects is further modified to the point where local effects matter much less and the change can be labelled morphogenetic.¹⁵ The paradox is that the deployment of this asymmetric social control as multilevel dynamics might either tame morphogenesis to bring back morphostasis or generate escalating social conflicts and resistance against dumping the costs of synchronization across levels to layers “below”, both of which will keep morphogenesis going.

The multilevel character of structure makes it possible to observe and understand that processes can be morphogenetic at one level (for example at the inter-organizational level) and morphostatic at another level (for example at the individual level). Collective action at the individual level may also slow down processes of collective action at the meso-level. One unknown factor is whether civil society will resist and refuse to grant legitimacy and acceptability to the kind of technology discussed, precisely because it undermines bottom up contributions to institutional entrepreneurship, or, instead, will drift with the current. Social costs imply resistance to the establishment of this new social discipline. How this resistance might transform this social order into a ‘relationally contested system’ (Donati 1983, 2011, 2013) remains to be investigated.

6.4 Conclusion: The Role of Markets and the State in Facilitating the ‘Gamified’ Slippery Slope

Coevolution of culture, structure and agency accounts for these changes. Future generations may not be as amused or as terrified as we are by these devices and prospects because these technologies, combined with social processes, may be

¹⁵Perhaps an indicator of changes in the “relational molecule” that characterizes modernity (Donati 1983, 2011, 2013) could be measured by changes in the social capital of collectives?

harbingers of new cultural and ontological perceptions of oneself and new ways of being in the world. Nevertheless, as already mentioned above, the transformational capacity of these technologies depends upon users who occupy privileged positions in social hierarchies and the organizations that they control (the military, police, marketing firms, among many others). It is worth narrowing them down to focus on the State (and its coercive organs), and market agents (e.g. large corporations). The acceptability of such technologies is increased by their transformation into commodities to be bought and used as tools, thereby masking their inherent transformational capacities at the collective level and their potential for undermining existing means of deliberating upon collective action.

For example there are many ways in which the market, particularly (health) insurance, can get access to data provided by both technologies combined and to the leverage its position exerts by selecting whom to insure and at what level. Metadata in each string provided by both devices can be automatically analyzed in the same way Google automatically scans Gmail messages and then advertises in the light of them. Runners of marathons think that they can beat the insurance companies by accepting to wear the jogging bracelet in exchange for lower premiums. But this insurance strategy is in fact a market and a cultural process combined. Indeed, this will be a way to start demonizing a whole range of cultural practices and activities: it could be about diet and spinach, as much as about smoking, drinking, etc. In the beginning, no one can stop anyone from being tempted to play this cultural insurance game and there are individual winners in it; but in the end the total population loses in terms of control and democracy. Society might very well accept these changes because they will be ushered in by a market for 'gamified' culture. This is very much the paradox of these new technologies. Their morphogenetic potential arises because they can be used for collective ends for which they were never envisaged at the individual level.

Archer's argument about 'social digitalization' (Chap. 7) and how (morphogenetic) synergy comes about can be applied to this technology of social control. The social processes that have been modeled using network analysis are the generic micro and meso-level processes helping members of any kind of collective to manage the dilemmas of collective action. It is not hard to see that they are at the heart of social life and a central preoccupation of sociology from its beginnings. The question underlying the attempt to provide a neo-structural specification of the very general logics (competition and opportunity) that have causal force and effects in the morphogenetic approach is part of a wider questioning about the determinants of variations observed over time in the deployment of these processes.

The cultural change of control based on relationships versus control without reliance upon relationality is the same as between collegiality and bureaucracy: with captors and network profiles combined, we see a new moment of the Weberian rationalization and bureaucratization of social life, a new avatar of the iron cage; we thought it was over, but it is not. In collegial contexts people value and use their relationships to coordinate their activities more or less conflictually, but not in the bureaucratic model where they think about coordination without personalized

relationships (i.e. through bureaucratic regulation) and the cultural outcomes are correspondingly different.

The huge databases that global private actors build today mix network profiles, biological data and much more information about individuals and collectives (Lazega et Prieur 2014). The spread of captors, whether seen as simply amusing or as sinister, is part of the increasingly close and efficient standardisation of life and current creation of a new social order/control that will separate those who conform to dozens of new everyday rules from those who do not. It will make access to healthcare and welfare conditional with lifelong consequences for individuals and their families, and prove consequential for the restructuring of societies. In particular, the relatively invisible but nevertheless violent exclusions of many generate servitude for a newly defined social class with access to benefits.

Data on people's ego-networks, when assembled into complete networks representing a "community" will allow organizations with access to this data to identify social movements and social movement organizations in the making, and perhaps to undermine, in many unobtrusive and Machiavellian ways, the latter's development and rights to defend their interests in regulation. Conditional access to healthcare and welfare and the stifling/steering of institutional work could co-evolve, and this co-evolution could indeed spell the very end of democracy. These processes have the flavour of Orwellian science fiction, but they are already woven together in the recognizable here and now.

Understanding these twenty-first century sociotechnical systems in a context of blurred public/private boundaries and increased robotization of skilled jobs is a necessary first step to contemplating their possible impact on social action. Such technologies threaten to (1) weaken institutional entrepreneurship, and (2) increase inequalities. Their combined intrusiveness, however, in conjunction with the global scale of their implementation and with forms of social stratification and inequalities, imposes new forms of social violence. These databases will allow private companies to begin to understand how social life and biology co-evolve.¹⁶ Social digitalization – defined here as articulation of numerical identity, industrialization/commodification of the body and the creation of socio-organizational networks – indeed calls for a reaction from public authorities but, in fact, raises the key political issue of their credibility as enduring counter-powers.

Acknowledgments I thank Margaret Archer, Julien Brailly, Rannald Sim and Pierre-Paul Vidal for stimulating insights that considerably improved this paper. I am grateful to all the members of the 2014 Workshop for helpful comments.

¹⁶On the relationship between these approaches and the ideology of "human enhancement", see Bateman and Gayon (2012).

References

- Archer, M. S. (1979). *Social origins of educational systems*. London: Sage.
- Archer, M. S. (1982). Morphogenesis versus structuration: On combining structure and action. *British Journal of Sociology*, 35, 455–483.
- Archer, M. S. (1988). *Culture and agency: The place of culture in social theory*. Cambridge: Cambridge University Press.
- Archer, M. S. (1995). *Realist social theory: The morphogenetic approach*. Cambridge: Cambridge University Press.
- Archer, M. S. (2012). *The reflexive imperative in late modernity*. Cambridge: Cambridge University Press.
- Archer, M. S. (Ed.). (2013). 'Introduction', *Social morphogenesis*. New York: Springer.
- Archer, M. S. (2015). How agency is transformed in the course of social transformation: Don't forget the double morphogenesis. In M. S. Archer (Ed.), *Generative mechanisms transforming the social order*. Dordrecht: Springer.
- Baker, W. (1992). The network organization in theory and practice. In N. Nohria & R. G. Eccles (Eds.), *Networks and organization: Structure, form, and action*. Boston: Harvard University Press.
- Bateman, S., & Gayon, J. (2012). L'amélioration humaine: Trois usages, trois enjeux. *Médecine/Sciences*, 10(28), 887–891.
- Berends, H., Van Burg, E., & van Raaij, E. M. (2011). Contacts and contracts: Cross-level network dynamics in the development of an aircraft material. *Organization Science*, 22, 940–960.
- Brailly, J., & Lazega, E. (2012). Diversité des approches de la modélisation multiniveaux en analyses de réseaux sociaux et organisationnels. *Mathématiques et Sciences Humaines*, 198, 5–32.
- Brailly, J., Favre, G., Chatellet, J., & Lazega, E. (forthcoming). From the embeddedness problem to the multilevel problem. *Social Networks*.
- Cheit, R. E., & Gersen, J. E. (2000). When businesses sue each other: An empirical study of state court litigation. *Law & Social Inquiry*, 25, 789–816.
- Chen, Z., Junshi C., Collins, R., Guo, Y., Peto, R., Wu, F., & Li, L. (2013). China Kadoorie Biobank of 0.5 million people: Survey methods, baseline characteristics and long-term follow-up. *International Journal of Epidemiology*, Downloaded from <http://ije.oxfordjournals.org/> by guest on 27 Nov 2013.
- Dezalay, Y., & Garth, B. (1996). *Dealing in virtue: International commercial arbitration and the construction of a transnational legal order*. Chicago: University of Chicago Press.
- Donati, P. (1983). *Introduzione alla sociologia relazionale*. Milan: Franco Angeli.
- Donati, P. (2011). *Relational sociology. A new paradigm for the social sciences*. London: Routledge.
- Donati, P. (2013). Morphogenesis and social networks: Relational steering, not mechanical feedback. In M. Archer (Ed.), *Social morphogenesis*. Dordrecht: Springer.
- Dudouet, F.-X. (2009). *La politique internationale des drogues: Histoire du marché légal des stupéfiants*. Paris: Editions Syllepse. Preface by Howard S. Becker.
- Dunworth, T., & Rogers, J. (1996). Corporations in court, big business litigation in U.S. Federal Courts, 1971–1991. *Law & Social Inquiry*, 21, 497–592.
- Favereau, O., & Lazega, E. (2002). *Conventions and structures in economic organization: Markets, networks, and hierarchies*. Cheltenham: Edward Elgar Publishing.
- Foucault, M. (2002). The risks of security. In J. Faubion (Ed.), *Michel Foucault: Power, essential works of Foucault 1954–1984* (Vol. 3). London: Penguin.
- Foucault, M., & Senellart, M. (Eds.). (2008). *The birth of biopolitics: Lectures at the College du France 1978–79*. London: Palgrave Macmillan.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Sociological Review*, 91, 481–510.
- Granovetter, M. (1994). Business groups. In N. Smelser & R. Swedberg (Eds.), *Handbook of economic sociology*. Princeton: Russell Sage.
- Hawkins, K. O. (1984). *Environment and enforcement*. Oxford: Oxford University Press.

- Lawson, T. (2013). Emergence and morphogenesis: Causal reduction and downward causation? In M. Archer (Ed.), *Social morphogenesis*. Dordrecht: Springer.
- Lazega, E. (1992). *Micropolitics of knowledge: Communication and indirect control in work-groups*. New York: Aldine de Gruyter.
- Lazega, E. (1994). Les conflits d'intérêts dans les cabinets américains d'avocats d'affaires: concurrence et auto-régulation. *Sociologie du Travail*, 35, 315–336.
- Lazega, E. (2000). Rule enforcement among peers: A lateral control regime. *Organisation Studies*, 21, 193–214.
- Lazega, E. (2001). *The collegial phenomenon: The social mechanisms of cooperation among peers in a corporate law partnership*. New York: Oxford University Press.
- Lazega, E. (2003). Rationalité, discipline sociale et structure. *Revue Française de Sociologie*, 2003(44), 305–330.
- Lazega, E. (2006). Capital social, processus sociaux et capacité d'action collective. In A. Bevort & M. Lallement (eds.), *Capital social: Echanges, réciprocité, équité* (pp. 213–225). Paris: La Découverte.
- Lazega, E. (2012). Sociologie néo-structurale. In R. Keucheyan & G. Bronner (Eds.), *Introduction à la théorie sociale contemporaine*. Paris: PUF.
- Lazega, E. (2014). Appropriateness and structure in organizations: Secondary socialization through dynamics of advice networks and weak culture. In D. J. Brass, G. (Joe) Labianca, A. Mehra, D. S. Halgin, & S. P. Borgatti (eds.), *Volume on contemporary perspectives on organizational social networks*. (Research in the sociology of organizations, 40, pp. 381–402). Bingley: Emerald Group Publishing Limited.
- Lazega, E., & Mounier, L. (2002). Interdependent entrepreneurs and the social discipline of their cooperation: The research program of structural economic sociology for a society of organizations. In O. Favereau & E. Lazega (Eds.), *Conventions and structures in economic organization: Markets, networks, and hierarchies* (pp. 147–199). Cheltenham: Edward Elgar Publishing.
- Lazega, E., & Prieur, C. (2014). Sociologie néo-structurale, disciplines sociales et systèmes complexes. *Revue Sciences/Lettres*, n° 2.
- Lazega, E., Jourda, M., Mounier, L., & Stofer, R. (2008). Catching up with big fish in the big pond? Multi-level network analysis through linked design. *Social Networks*, 30, 157–176.
- Lazega, E., Mounier, L., Snijders, T., & Tubaro, P. (2012). Norms, status and the dynamics of advice networks. *Social Networks*, 34, 323–332.
- Lazega, E., Jourda, M., & Mounier, L. (2013). Network lift from dual alters: Extended opportunity structures from a multilevel and structural perspective. *European Sociological Review*, 29, 1226–1238.
- Leca, B., & Naccache, Ph. (2006). A critical realist approach to institutional entrepreneurship. *Organization*, 13, 627–651.
- Lemercier, C. (2007). The Judge, the Expert and the Arbitrator. The Strange Case of the Paris Court of Commerce (ca. 1800-ca. 1880). In C. H. Rabier (Ed.), *Fields of expertise. A comparative history of expert procedures in Paris and London, 1600 to present* (pp. 115–145). Newcastle: Cambridge Scholars Publishing.
- Macaulay, S. (1963). Non-contractual relations in business, a preliminary study. *American Sociological Review*, 28, 55–67.
- Olson, M., Jr. (1965). *The logic of collective action*. Cambridge, MA: Harvard UP.
- Perrow, C. (1991). A society of organizations. *Theory and Society*, 20, 725–762.
- Porpora, D. V. (1989). Four concepts of social structure. *Journal for the Theory of Social Behaviour*, 19, 195–212.
- Raub, W., & Weesie, J. (1990). Reputation and efficiency in social interactions: An example of network effects. *American Journal of Sociology*, 96, 626–654.
- Reiss, A. J., Jr. (1984). Selecting strategies of social control over organizational life. In K. O. Hawkins & J. M. Thomas (Eds.), *Enforcing regulation*. Boston: Kluwer-Nijhof.
- Sample, Ian & agencies, 'Soldier controls bionic arm using power of thought. *The Guardian UK* (11 Dec, 2013) <http://www.theguardian.com/science/2013/dec/11/soldier-controls-bionic-arm-using-power-of-thought>. Accessed 13 Dec 2013

- Selznick, P. (1949). *TVA and the grass roots: A study in the sociology of formal organization*. Berkeley: University of California Press, Conclusion.
- Shapiro, S. P. (1984). *Wayward capitalists. Target of the securities and exchange commission*. New Haven: Yale University Press.
- Skloot, R. (2010). *The immortal life of Henrietta Lacks*.
- Snijders, T. A. B. (2001). The statistical evaluation of social network dynamics. In M. E. Sobel & M. P. Becker (Eds.), *Sociological methodology* (pp. 361–395). Boston: Basil Blackwell.
- Snijders, T. A. B., & Bosker, R. (1999). *Multi-level analysis*. London: Sage.
- Stinchcombe, A. (2001). *When formality works*. Chicago: The University of Chicago Press.
- Strauss, A. (1978). *Negotiations: Varieties, contexts, processes and social order*. San Francisco: Jossey-Bass.
- Tilly, C. (1998). *Durable inequalities*. Berkeley: University of California Press.
- Vaughan, D. (1983). *Controlling unlawful organizational behavior*. Chicago: University of Chicago Press.
- Wang, P., Robins, G., Pattison, P., & Lazega, E. (2013). Exponential random graph models for multilevel networks. *Social Networks*, 35, 96–115.
- Zelizer, V. (1979). *Morals and markets: The development of life insurance in the United States*. New York: Columbia University Press.

Chapter 7

How Agency Is Transformed in the Course of Social Transformation: Don't Forget the Double Morphogenesis

Margaret S. Archer

7.1 Introduction

I have already ventured a specific generative mechanism whose potential could be the transformation of late modernity into a Morphogenic society (Archer 2014, Ch. 5). This is not a prediction; Social Realism always acknowledges that such potentials may remain unrealized because of (a) countervailing mechanisms and (b) unforeseen contingencies – neither of which can be excluded from the open system that is society.

In brief, the generative mechanism advanced was grounded in the existence of ‘contingent complementarities’ between structural and cultural elements of late modernity that were explored and exploited by two different groups working in synergy. On the one hand, it resulted from an exponential addition of new items and novel sources of ideational variety that vastly exceeded the pool of ideas available in previous historical periods. These originated from positive feedback between digital scientists working in universities. On the other hand, the linkages established between compatible items are always reliant upon agents who see advantages in making them. In this case, the new variety of ideas had technological applications that readily translated them into practice, thus encouraging their take-up by enterprises in the nascent global economy. In other words, this is an important instance of the interplay between ‘structure’ and ‘culture’, whose properties and powers are irreducible to one another.

At the meso-level this morphogenetic potential was amplified by the synergy that developed between digital science and neo-capitalism, its multinational enterprises and financial institutions. Since the primary concern of the digital scientists was

M.S. Archer (✉)
Centre for Social Ontology, Department of Sociology,
University of Warwick, Coventry, UK
e-mail: margaret.archer@warwick.ac.uk

with the *diffusion* of their innovations and that of the economic vanguard was in their *profitability*, they worked together but their synergy pulled social morphogenesis in two different directions: a reinforcement of *competition* on the part of the economy and the introduction of new *opportunities* on the part of digital innovators. This makes for a more complex story than the usual empiricist accounts of the ‘rise of information society’.

In this chapter I will focus upon the recent effects of the changes in Structure and Culture introduced by Agency (the protagonists respectively of digital science and contemporary capitalism). However, any major change in the social order also has repercussions upon agency through being differentially beneficial or prejudicial (objectively and subjectively) to existing social groups. In the broadest terms, this prompts the re-organization of certain social groupings, including the de-grouping of others. This secondary impact of the generative mechanism is the ‘double morphogenesis’ that is the subject of this chapter.

The Morphogenetic/Morphostatic (M/M) approach seeks to make the components of SAC methodologically tractable. The M/M framework had been used in a variety of different settings to deal with problems at all levels of sociological analysis. However, this book series is the first time when the M/M approach has *not* been used to give an account of morphogenetic changes that have already taken place.

Instead, in examining whether or not the emergence of a ‘morphogenic social formation’ from late modernity is not only conceivable but realistic, we break into an unfinished cycle in the middle (that is, in its T^2 – T^3 phase). The basic M/M diagram is reproduced below, for those unfamiliar with it (Archer 1995). It also helps to situate the discussion taking place in the present volume (Fig. 7.1).

Some have suggested that there is a ‘clean break’ between the morphogenetic origins of any social form (such as the Internet) and the morphostatic processes that then maintain such a form in being. To such theorists, the diachronic causes for the existence of a phenomenon are firmly separated from the subsequent synchronic account of what sustains it in that form. Whilst those like Sawyer (2005) and Elder-Vass (2010) are obviously philosophically correct in distinguishing between the causes of origin and the causes of continuation of given phenomena, my empirical conviction is that large-scale social change is rarely (if ever) a matter of ‘clean breaks’ and that they can neither be understood nor explained in such terms – even in the case of revolutions.

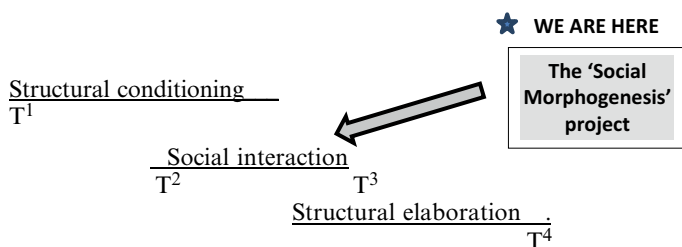


Fig. 7.1 The basic M/M diagram of one morphogenetic cycle

At the end of a morphogenetic cycle, T^4 will be different in form, organization and state from at T^1 , but T^4 is not a switch occurring overnight. This is important because were our one global social order to become a Morphogenic Society, this new social formation would not be a ‘clean break’ that suddenly greets us one morning.

Although the diagram is extremely simple (Archer 1995, pp. 192–4), it is also very precise, but only three points need to be signalled here:

- Why the top line representing prior structural (in this case) conditioning does not have a definite temporal ending, having ceased to be a *conditional influence* when the bottom line representing ‘Structural elaboration’ gets underway. Traces of historic structures can linger on in the same way as other relics, without their exercising any conditional influence at all (such as the now meaningless European titles that can be bought, shorn of their past legal privileges and obligations). Please note, however that the top and bottom lines are always temporally continuous; there is never a moment without ‘structural conditioning’.
- Next, ‘social interaction’ on the middle line at T^2 – T^3 , is the only temporally determinate phase, whose implication is that the relations between groups *cease to take that particular form*, once ‘structural elaboration’ has fully engaged (bottom line). Prior to that, the *double morphogenesis* of agency, in which groups and group relations are themselves transformed when social transformation *starts to get underway, also intensifies as structural elaboration makes headway*.
- Finally, ‘Social Interaction’ is shorthand; it summarizes intergroup relations:

$$< R^1 \leftrightarrow R^2 : R^2 \leftrightarrow R^3 : R^3 \leftrightarrow R^4 : R^3 \leftrightarrow R^1 : R^2 \leftrightarrow R^4 : (R^1, R^2, R^3, R^4) >$$

and does so iteratively for however many groups happen to be involved, as Donati has frequently pointed out.

This sounds exigent, but it is essential to the arguments I will advance in the next sections. These, in order of appearance, are that there are no ‘clean breaks’ between morphogenesis and morphostasis; if preferred, it is extremely difficult and I believe impossible in practice to sever causes of origin cleanly from causes of continuation, at least in the social domain. As far as I am aware, neither of the authors who hold that this can and should be done has ever conducted a sociological study over time and clean hands account for thinking in terms of ‘clean breaks’, rather than the inescapable messiness of macroscopic social processes.

The absence of ‘clean breaks’ also illustrates (it is not a necessary condition) how the M/M approach deals with the synchronic question about causes of continuation, which empirically are not simply about maintenance but, concern *successful maintenance* involving varying degrees of agential contestation. Unlike Elder-Vass, who always wants to separate the ‘*morphogenetic causes* that bring each type [of emergent entity] into existence’ from ‘the *morphostatic causes* that sustain their [emergent powers] existence’ (Elder-Vass 2010, p. 69), I hold that there is no point at which nothing but morphogenesis gives way to nothing but morphostasis or exclusively positive feedback to exclusively negative feedback.

This is because during any social contestation that generated some given social form, those who lost out do not quietly fade away; on the contrary, they may retain their organisation and their objectives, fight on and later win concessions. Thus, morphostatic analysis cannot suffice alone and neither can the analysis of any institution or organization concentrate exclusively upon negative feedback. The explanation of why a new structure endures is often in part because it accommodates changes in its form pursued by rear-guard action – changes that ‘punctuate’ morphostasis synchronically. In other words, an emergent entity (such as an educational system) can retain its key relational organization of parts (those making it, say, a centralised system), without it remaining *exactly* the same entity or able to exhibit identical properties and exert identical powers as at the point of its emergence.¹ Simultaneously, an emergent organization also defines new groups of losers. Such groups have no interest in contributing to the current organization’s morphostasis, although their actions and aims will differ from those of old contestants who still battle on.

To my knowledge, neither Sawyer nor Elder-Vass has ever mentioned, let alone given attention to ‘*the double morphogenesis*’, to how groups themselves and group relations are transformed in important respects in the course of pursuing and introducing social transformations (Archer 1995, Ch. 8). In fact, I don’t know of a single commentator or critic who has ever referred to the ‘double morphogenesis’. Yet, in this chapter I will argue that the agential re-grouping and de-grouping involved is one of the most crucial features taking place in late modernity as nascent structural and cultural morphogenesis engage, and it explains why globally we still remain in the prolonged T²–T³ phase.

In fact, any generative mechanism that is transforming the social order also ineluctably sustains or transforms the prior groupings of Primary and Corporate agents. ‘Primary Agents’ are collectivities of people who share the same life-chances. They are aggregates, but these can have important social consequences. However, they are different from ‘Corporate Agents’ who are never aggregates because they have organized themselves in pursuit of certain goals and have articulated the changes they seek.

The examination of the ‘double morphogenesis’ is about what is *already* happening to social pre-grouping and re-grouping in late modernity as social morphogenesis does begin to engage. The effects of the generative mechanism are still unfolding during T²–T³ and have been doing so for approximately 30 years. Therefore, it should be possible to pinpoint some of the changes already registering on the bottom line, which constitute both ‘social morphogenesis’ and *the double morphogenesis* (well before we get to T⁴). This chapter will examine the two processes together, showing how, as the generative mechanism engages, Corporate Agency, ‘in its attempt to sustain or transform the social system, is ineluctably drawn into sustaining or transforming the categories of Corporate and Primary Agents themselves’

¹As in the French Loi Falloux (1850), under which the Church regained the freedom to open schools after almost half a century of prohibition.

(Archer 1995, pp. 260–1). Generically, the two together will be decisive for whether or not T^4 is eventually reached and whether or not it merits being called a Morphogenic society.

7.2 The Generative Mechanism of Late Modernity and the Double Morphogenesis

To account for the engagement of a generative mechanism propitious to intensified morphogenesis, it is necessary to backtrack briefly to the context that allowed the ‘contingent compatibility’ between structure and culture to be explored and led to the emergence of new variety that, in turn, fostered further variety (Archer 2014). In doing so, importance is always attached in the M/M approach to the relation between ‘system’ and ‘social’ integration and to Lockwood’s insight that the conditions for substantial social change are found in the relations between the two (Archer 1996). This Chapter concentrates upon the systemic changes introduced by the generative mechanism and how the low social integration entailed in the ‘double morphogenesis’ both reflects the dual directions in which the social order is being pulled and works to delay resolution between them and the imminent arrival at T^4 .

7.2.1 *The Plummeting of System and Social Integration in Late Modernity*

In the quarter of a century following the Second World War, the developed democracies achieved *mutual regulation* between their institutional orders and their social orders. This is usually summarized in the formula ‘social democracy + the neo-liberal economy + the welfare state’. Mutual regulation derived from mutual dependence – particularly of national industry upon its national labour force. Without that, industrial interests would have pursued the *situational logic of competition*, inherent in the liberal market economy, and the unionized workforce would have responded with industrial militancy.

The necessary but not sufficient conditions for mutual regulation were rooted in the nation-state itself. Whilst ever the state’s boundaries also largely defined national societies, then the necessary interplay between the systemic and the social within the same territorial confines ineluctably meant that the state of the one mattered to the state of the other, prompting compromise between them.

Such mutual regulation was largely *morphostatic*,² representing a balance between the existing institutional and social orders that stabilized relations between

²Walter Buckley defines ‘morphogenesis’ as ‘those processes which tend to elaborate or change a system’s given form, structure or state,’ as contrasted with morphostatic processes ‘that tend to preserve or maintain a system’s form, organization, or state.’ (1967, p. 58).

them by virtue of the compromise formula. During these ‘golden years’ the two-way regulation established between system and society was better than it had been throughout modernity, even though developed societies remained far from egalitarian and their institutions far from fully participatory. What had been gained represented conciliation and concession within a *relationally contested* social order rather than the out-workings of social solidarity. Any promise of further mutual regulation, such that fairer societies might be progressively and peacefully negotiated, began to disintegrate in the 1980s. It did so as two *morphogenetic* processes came into synergy with one another and fostered one another’s intensification (as spelt out in Archer 2014, Chapter 5 of Volume II).

On the one hand, the growth of multinational corporations became unfettered by one national pool of organized labour as they freed themselves to pursue the *situational logic of competition*, intrinsic to capitalism, but on a new global scale. Yet, to do so globally simultaneously increased their reliance upon digital science (developed in the universities thanks to serious military backing at the start) for communication, cost/benefit analyses and logistics. As such, this is the well-known phenomenon of the rise of multinational Corporate Agency whose members articulated the longer and more complex supply chains involved in production, without reference to the social integration of their geographically dispersed workers. Indeed, there is evidence from the ILO (2012) that the human trafficking of ‘forced labour’ increased apace (estimated at over 20 million), especially in East Asia.

However, multi-national enterprises were neither all of one kind nor were their operations consensual in practice. Large banks, too, are multinationals as are the (relatively) smaller pension funds of developed countries. After 1980 it became increasingly fallacious to conflate multi-nationalism with economic financialization as the gulf widened between the real economy and novel financial processes such as the sale of derivatives or huge growth of hedge fund activities. Although the latter were even more dependent upon digital science and computerization, these played the market as a whole rather than having interests vested in any given enterprise within it. Hedge funds, for example, were estimated to account for half of the trading on the London and New York Stock exchanges by 2006 (Stulz 2007, p. 175), profiting from statistical arbitrage (exploiting short run anomalies in share prices, rather than investment being based upon evaluation of equities themselves) and promoting high frequency computerized trading. As such, their complex operations are supremely dependent upon vanguard digital science³ and indifferent to the disruptions induced in corporate environments within the real economy.

Thus, the finance marketeers represent a new and growing Corporate Agent, alongside that of the global productive enterprises, and most often with divergent interests from them and their workforces alike. As Morgan concludes: ‘if we resist

³ ‘It is nearly impossible for human portfolio managers and traders to implement a strategy involving so many securities and trading so frequently without making use of quantitative methods and technological tools such as automated trading platforms, electronic communications networks, and mathematical optimization algorithms’ (Khandani and Lo 2007, p. 7). The authors conclude that ‘It is no wonder that the most successful funds in this discipline have been founded by computer scientists, mathematicians, and engineers not by economists or fundamental stock pickers’ (p. 12).

thinking of corporations as financialized entities and think of them as productive units that carry the economic obligations of societies expressed through labour, then from this perspective hedge funds have proved on balance more of a problem than a benefit. Hedge funds are active elements of a pathologically dysfunctional finance system' (2014, p.15). For, in turn, the corporate response to instability in the credit markets created by banks prompted limitations in company investment, with negative knock-on effects for employment rates, for occupationally-based pension funds with their growing deficits, and, ultimately for social integration itself.

On the other hand, turning to digital science and its innovators, the forward thrust of informatics depended above all upon *diffusion* of its achievements in the pursuit of the *situational logic of opportunity*, that is, exploiting 'cultural compatibilities' to practical technological effect, whose visible successes were followed by further funding or venture capital. The relations between globalized capitalism (productive and financial) and digital science were internal and necessary ones despite the pursuit of their different structural and cultural agendas. As with the two types of multi-national enterprise differentiated above, it is necessary to distinguish two emerging forms of digital Corporate Agency. Whilst the stories of successful software entrepreneurs ('digital collaborators') are well rehearsed in paperbacks (and briefly reviewed in Chap. 5, 2014) the diametrically opposed agenda of the 'digital diffusionists' constituted a distinct form of Corporate Agency. In important ways their objectives became even more distinctive, with 'diffusionists' promoting the 'cyber-commons'. My argument will be that the contestation between these four new Corporate Agents, each with their own (morphogenetic) aims, made them jointly and severally responsible for the ensuing economic crisis and systemic mal-integration.

Conversely, the *overall synergy* between the new forms of globalized capitalism and the generic innovations of digital science became increasingly interdependent and collaborative: the overlap between them grew in terms of personnel, further innovation, and ever newer applications. In short, in the last volume I advanced *the generative mechanism of late modernity as constituted by market competition and the diffusion of digital science needing to work in synergy*.

However, collaboration is not co-operation and, as synergy undoubtedly grew in scope and intensified in impact, the bulk of the literature on the *Roaring Nineties* (Stiglitz 2003) and the crisis that followed was monopolized by economics. There is no dispute with heterodox economists who accentuated the growth in 'systemic mal-integration' that accompanied the crisis and the fallacious attempts to prop up the status quo with international and intranational austerity measures. Nevertheless, there is a sociological theme running alongside and constantly obtruding itself. This is such that 'the crisis' cannot be presented in terms of re-balancing the books, of austerity as the harbinger of new economic growth, of future transparency of economies being introduced by business leaders coming to adopt virtue ethics. What is missing is the plummeting of 'social integration', because it affected both the possibility of 'economic recovery' and *also* the adoption of opportunities to re-envision economic activity that are inherent in digital technology. In short, the two forms of mal-integration – social and systemic – grew in parallel.

Secondly, those sociological accounts that interpret the development of ‘networked connectivity’ as synonymous with growing social integration seem erroneous as, for example, in Wellman’s argument that the triple revolution of social networks, the rise of the Internet and the advent of mobile connectivity served to *build trust*, ‘the primary currency of social networks’, for husbanding resources that provide support’ (Rennie and Wellman 2012, p. 19), as will be argued in the last section of this Chapter.

7.3 Synergy and Its Tensions: The Contestation of Intellectual Property

Simply because two parties ‘work together’ (the meaning of synergy), it does not follow that they do so harmoniously and certainly not with any regard to the particular interests of each other. That was why in outlining the generative mechanism, I maintained that the two main parties – economic and scientific – were pulling society in different directions through the very forms of morphogenesis promoted within each (Archer 2014). Digital science needs diffusion – that is its requirement for developing; market enterprises need informatics – that is their requirement for profitability. In part these needs are compatible; the more competitively successful a corporation is, the more it diffuses the hardware and software it uses. Equally, the more popular a digital advance proves to be, the harder it becomes for any enterprise to ignore its existence because, for example, *not being seen on Facebook* constitutes a commercial penalty.

As already seen, their synergy works in tension and, with over-simplification, this is epitomized in one form of contestation that grew in importance. Its usual name is ‘intellectual property’ but the radical *diffusionists* contested this nomenclature from the start as it implies that cultural goods are subject to the same scarcity, loss of value through sharing them, and proprietary monopolization that characterizes most material goods. Contestation goes much further, into challenging intellectual copyright, circumventing patents, substitution of pharmaceuticals, products and trade secrets – all of which will be discussed further. The reason for doing so is that ‘intellectual property’ is the battleground upon which *the form of morphogenesis* that will most likely predominate in the re-shaping of late modernity is being played out. Should there be an outright ‘winner’ then the form of Morphogenic society would be very different as would its beneficiaries.

7.3.1 Intellectual Property: Opportunism Versus Opportunity

That we are indeed on cultural terrain is acknowledged by all who have supported the proclamation of the ‘Knowledge Society’, the ‘Information Age’, ‘Technological Society’ etc. and these are the most common characterizations of late modernity.

What is glaring by its absence is the general failure to recognize that the nature of culture itself means that its social dynamics are entirely different from those attaching to material scarcity, be it in land, military strength or means of production. As Thomas Jefferson expressed the difference in 1813:

If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of everybody...Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me. (August 13th 1813).

In other words, cultural items are strangers to the workings of scarcity, which can only be imposed artificially. Containment strategies (edicts of seclusion, the burning of books, censorship) require coercion to be even temporarily effective (Archer 1988, pp. 188–98). The situation becomes much more precarious once morphogenesis engages because the rapid release of cultural novelty, innovation and new variety all spell a precipitous reduction in future calculability. To protect market investment, the multinational enterprises responded by extending and reinforcing legal patents and copyright law to ensure a calculable market by temporarily ‘freezing’ uncertainty. *Ceteris paribus*, this assured short-term profitability and freed up corporate resources to make the next innovative development that would then be protected in the same manner (Morgan 2013). In the finance market, the development of complex derivatives and hedge funds rendered risks more calculable and provided insurance for the biggest players, whilst the popular ‘demand’ for financial services was manipulated by the proliferation of credit facilities, sub-prime mortgages and payment protection schemes, all the way down to payday loans, with their 6,000 % annual interest rates.

The economic importance of intellectual property grew in the second half of the twentieth century, featuring in the Universal Declaration of Human Rights⁴ and protected by the World Intellectual Property Organization (WIPO), a UN agency after 1967. By 2013, the U.S. Patent and Trademark Office claimed that the worth of intellectual property to the national economy exceeded \$5 trillion and was estimated to underwrite the jobs of 18 million people, with similar values being registered in the E.U. Two-thirds of the worth of large U.S. corporations can be traced to intangible (intellectual) assets and ‘IP-intensive industries’ are estimated to generate 72 % more value added (price minus material cost) per employee than “non-IP-intensive industries”. Penalties for copyright infringement became more stringently criminalized under the ACTA trade agreement (2011), whilst trade in counterfeited works traducing copyright represented a worldwide \$600 billion industry by that date (Bitton 2012). Meanwhile, the concept of intellectual property enlarged, thanks to the influential Motion Picture Association of America (Wharton 1992), and also came to include CDs, DVDs, and computer games (Fisher 1999).

⁴Article 27 reads: ‘everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author’.

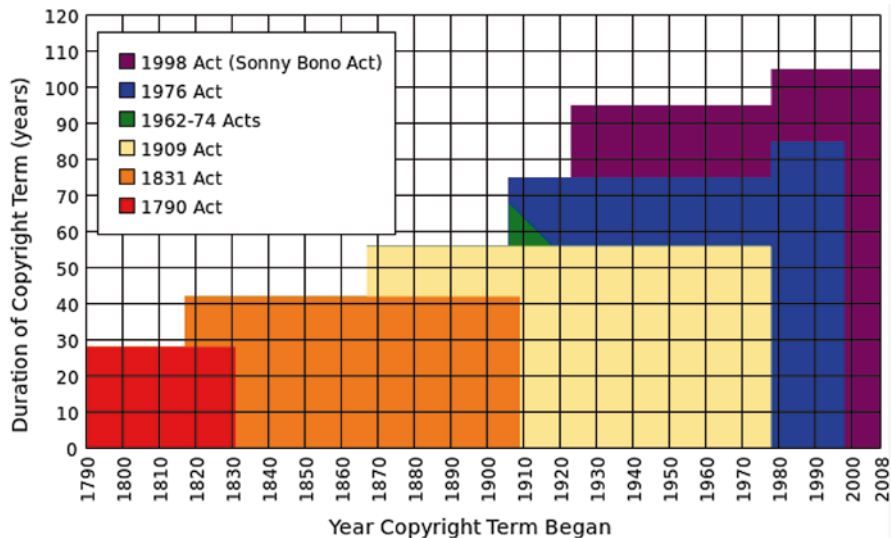


Fig. 7.2 Growth in copyright (Source: Wikipedia. Intellectual property’, p. 8. http://en.Wikipedia.org/wiki/Intellectual_property (downloaded 19.11.2013))

It invaded the Internet with, for example, Mark Zuckerberg succeeding in upholding his property rights to all material posted on *Facebook*.

This proliferation of Intellectual Property rights represented commercial *opportunism*. In every case, such rights allowed companies to charge higher than marginal costs of production, supposedly to recoup their Research and Development investment, but usually (especially in medicine) at prices prohibitive to the poor (Sonderholm 2010). However, it is salutary to note how competitive strategy can temporarily work both ways in relation to intellectual property rights. For example, Tesla Motors recently released its patents for the electric cars it produces, ‘in order to advance the production of more electric cars’⁵ and doubtless increased profit from their sales (Fig. 7.2).

Moving over to the other party working in synergy, Richard Stallman, a graduate of the original hackers, questioned the use of ‘property’ in a cultural context, where ‘intellectual protectionism’, ‘monopoly’ or ‘digital restrictions management’ were held to be more appropriate terms. His ‘Free Software Foundation’ (1985) launched the *diffusionists’* offensive with ‘copyleft’, which was quickly followed by Linus Torvalds’ release of the Linux kernel, the modifiable source code that was placed under General Licensing in 1992. In turn, this led on to the Open Source and later the Open Access movements. In all instances, ‘Opening the source code enabled a

⁵ See <http://guardiananlv.com/2014/06/tesla-motors-releases-its-patent-to-the-public>

self-enhancing diversity of production models, communication paths and interactive communities' (Wikipedia 2013). Many anti-copyright organizations followed, such as the Swedish think-tank Piratbyrå, one of whose founders (Fleischer) argued that copyright law is obsolete since it cannot cope with Internet diffusion, particularly with the advent of Web 2.0. Many focused on peer-to-peer file sharing, digital freedom and freedom of information, to be shared in solidarity. Others pioneered the distributed search engine, directly challenging copyright policy (for example, Kazaa and Gnutella).

The details of this cut and thrust are complex, but in every case they exemplify a commitment to *opportunity in opposition to opportunism*: to groups working co-operatively to make what they would of the digital resources now culturally available, but firstly needing to be publicly accessible.

The group formation and reformation involved in this contestation are a crucial part of the *double morphogenesis*; it is responsible for many of the technical developments that came into existence over the last 20 years, responses to which have, in turn, resulted in further agential re-grouping. What I have termed the *opportunists versus protagonists of opportunity* is what journalists called 'the copyright wars' and these are matters of global contestation. Although the *opportunists* have the forces of the economy, the state (e.g., the Chinese censorship of computer servers), and the law (the Digital Millennium Copyright Act and its European equivalents) on their side, nevertheless, they are on the defensive. WIPO has acknowledged the conflict between the current protection of intellectual property and human rights (World Intellectual Property Organization 2002). The UN Committee on Economic, Social and Cultural rights maintained in 2001 that such 'property' was governed by economic goals, whilst it should be recognized as a social product (Chapman 2002).

In short, contestation promoted further morphogenesis, which consequentially reduced the artificial scarcity that had been placed upon cultural goods, thus opening up new *opportunities* for the exploration and exploitation of 'contingent complementarities'. However, as far as the 'double morphogenesis' of agency is concerned, the newly defined Corporate Agents promoting the cyber-commons were small and highly educated groups in relation to the population at large, even in the developed world.

7.4 The Generative Mechanism's Divergent Consequences for the 'Double Morphogenesis'

7.4.1 *The Double Morphogenesis: The Top-Down Effects of the Economic Crisis*

To recapitulate, the 'double morphogenesis' results from agents succeeding in introducing structural and/or cultural transformation but being transformed themselves and transforming other agents in the self-same process. In other words, it entails

agential re-formation, in terms of personal motivation and also a re-grouping of alliances. The reason for dwelling initially upon the *economic crisis* is because it changed the social context affecting the actions of all agents through its systemic mal-integration. The effects of digital science on the ‘double morphogenesis’ are ‘bottom-up’ and were entirely different in kind. But they had to confront an agential environment where social integration and trust had slumped even lower.

In the welter of literature on the current crisis, few commentators have picked up upon the importance of the mal-integration of the financial system for exacerbating social mal-integration, probably through according exclusive significance to economic considerations. Yet integration and trust cohere closely because, as Colledge, Morgan and Tench (2014) emphasize, ‘trust seems to be no more or less than a generalizable term for a situational social glue in the form of *how* relations are engaged,’ but one that lost its adhesive quality within the financialized economy. Certainly, Bachman had written about ‘a tremendous global trust crisis’ (Bachman 2011), but did so from within Giddens’ structuration approach, whose central conflation does not permit any analysis of the interplay between the SAC components.

Trust involves uncertainty, otherwise it would be redundant, and it is relatively resilient to booms, bubbles or slumps, *provided* public investors (financial advisors, bank managers, mortgage granters) appear to be winning or losing alongside their clients. Oversimplifying considerably, the global crisis provided many indicators of a growing divide between the concerns and practices of public investors and those of their clientele, all with *repercussions for denting trust and fuelling the slump in social integration*.

Jamie Morgan and Ioana Negru have detailed these briefly and clearly for the finance industry as follows (2012):

- (a) A pervasive sales culture in both investment and commercial banking that took an adversarial attitude to the customer, as though the interests of the organization and client were opposed
- (b) A general standard of service that led the finance industry to have the highest rate of (retail) customer complaints amongst any recognized major industry (including construction)
- (c) The specific mis-selling of payment protection insurance (PPI) on a multi-billion pound scale
- (d) The specific mis-selling of unsuitable interest-rate hedging products to small firms
- (e) The specific mis-selling of investment products to investors who were unaware of the ‘risk’ of the ultimate destination of their capital (e.g., transmitted through Ponzi schemes, such as the Madoff investment vehicle)
- (f) The specific sale of investment products in which the bank also had a proprietary and sometimes counter interest
- (g) The general operation of transnational payment and capital transfer systems that facilitated the activities of organized crime and pariah states

- (h) The long-term manipulation of key benchmark rates used in multiple ways in finance markets: Libor, Euribor etc.
- (i) A compensation system for senior executives that has seemed divorced from the context of the rest of the economy and divorced from the actual performance of the individual banks and which has served to create a sense of alienation and indignation amongst the ordinary populous.

The effects of crisis were augmented by those of ‘curative’ austerity measures. Objectively, these impacted hardest upon the poor because of increased unemployment and further reductions in welfare benefits, leaving even the full-time working poor worse off. However, their residual class consciousness had never made this increasingly heterogeneous group a ‘trusting’ collectivity; even during the ‘golden interlude’ they had effectively been bought off by new-found ‘affluence’ – and its extrapolation into the future. Subjectively, those whose trust was most savagely dented were precisely those ‘middle Englanders’ and French *fonctionnaires* (52 % of the active population), to whom centrist political parties all now appealed as their support base. Their new inability to afford mortgages, to feel securely pensionable, to count on annual salary increments and to depend upon free health care provisions undercut trust and precipitated many into scapegoating by supporting the ultra-right (UKIP or the Front National of the Le Pens). Those who did not immediately blame ‘migrants’ or ‘Europe’ personalized matters by fastening upon bankers’ bonuses or politicians’ fiddling of their expenses.

Incorrect as all these individualistic diagnoses were, they indicated a negative form of ‘double morphogenesis’ in which the previous mainstay of support for the econo-political system (small shareholders and members of political parties) was effectively re-grouped into a suspicious and fearful collectivity of Primary agents. That its members had no revolutionary heritage whatsoever did not mean that they were immune to other morphogenetic changes and the new forms of Corporate agency they were fostering. Latter-day capitalism continued its zero-sum production of winners and losers, but what had altered was the growing proportion of the latter – many of whom had an inchoate awareness that they had been betrayed by the old competitive ways. However, did this spell their greater openness to new opportunities?

7.4.2 The Double Morphogenesis: The Bottom-Up Effects of Digital Diffusion

Digital science originated in the universities and, from the beginning not all research scientists embraced big business despite their reliance upon capitalization for the diffusion of their innovations (Archer 2014). From the original group of ‘hackers’, can be traced the origins of new Corporate agents who very quickly articulated

alternative aims (the cyber-Commons, open-sourcing of knowledge, peer-to-peer production and subsidiarity) and implemented them in new organizational forms (General Licensing, *Wikipedia* and, eventually, social networking media). All of these were predicated upon ‘win-win’ scenarios; that the cultural sharing of digital resources enhanced everybody and impoverished no-one. As they advanced and diversified, these too introduced their own ‘double morphogenesis’, with its dual aspects of re-grouping tracts of the global population into novel types of alliance formation (some to become Corporate agents) and transmuting the personal motivation of a significant proportion of Primary agents.

7.4.2.1 The Double Morphogenesis of Corporate Agency

There are four elements it is particularly important to highlight because each of them intensifies morphogenesis whilst simultaneously holding the potential to increase social integration. Firstly, the **Open Source Movement** (Tiemann 2006) is literally based upon software source codes being publicly available (via free licensing), making them accessible to all and enabling their adaptation to specific ends as defined by users themselves. It is based upon collaborative production and its products are open for further elaboration and sharing. As a result – only possible because of the Internet – the marginal costs of appropriating digital innovations are reduced to near zero. Since the movement coincided with a huge growth in personal computer ownership its thrust was towards social inclusion, which grew incrementally as more agents came to appreciate the *variety* of new applications possible, and then to appropriate these themselves. Moreover, because rooted ‘in the open-source ARPAnet, its hacker culture, its decentralized, scattered architecture made it difficult for big, established candidates, companies and media to gain control of it’ (Trippi 2004).

The Open Source Initiative supplies many practical examples of how morphogenetic variety encourages further variety. By the time of the Open Source Summit (1998), the movement was working as a consumers’ co-operative, aiming to reduce the restrictions imposed by copyright in order to stimulate creativity, outside the proprietary model, and spawning organizations such as ‘Creative Commons’ that stressed voluntary collaboration rather than ‘crowd-sourcing’ that benefits the market. Free co-operation proved a gratuitous source for the relational production of goods and is both the exemplar and foundation of how the ‘win-win’ scenario is a realistic alternative to the ‘win-lose’ model of competition.

There is not space to detail the novel applications and the developments that followed, but their range covers the following: in scientific research, ‘The Science Commons (Open Source Summit 1998); in publishing: Project Gutenberg (2014) and Wikisource; in pharmaceuticals, the ‘Tropical Disease initiative’ (2014) and the ‘Open Source Drug discovery for Malaria Consortium’ (2014); in technology, sensitive to environmental implications; ‘Open-source-appropriate

technology' (Buitenhuis et al. 2010); in teaching, providing open source courseware, forging the connection between science and social benefit – and in retailing, producing coca cola taste-alikes!

At the same time, it is proper to signal that inclusive creative autonomy can also generate relational evils. The development (2012) of 'Defense Distributed' with the aim of designing 'a working plastic gun that could be downloaded and reproduced by anybody with a 3D printer' (Poeter 2012), highlights the dangers (that appear to have been realized in Britain during September 2013). If Open Source seeks to thrive through beneficent Corporate agents, then it needs to work out a binding form of normative self-regulation – along the lines that *Wikipedia* has done 'in-house', but is much more difficult to achieve in the open ether.

Secondly, **Commons-based peer production** is differentiated from the centralized decision-making process typical of most for-profit enterprises and market-based production, where performing different tasks for differential pay is regarded as a necessary incentive and the centralized co-ordination of tasks to be indispensable. The operability of commons production depends upon the modularization (of tasks), granularity of modules (allowing those with variable levels of skill and motivation to contribute), and low-cost integration for combining contributions into finished products (Benkler 2006). Its advantages include 'customization' and 'specialization' in line with specific needs, 'cross-fertilization' often between surprisingly disparate fields, and the accommodation of variations in human creativity and commitment. It results in information diffusion and contributes to the integration of variety as diversity within the population, thus countering the potential monopolization of new variety by elites or the fissiparous tendency of increased heterogeneity (Benkler and Nussbaum 2006). Thus, it is not simply pro-social but pro-social integration.

Although often criticized for downplaying the need for supervisory co-ordination, Michel Bauwens' 'peer2peer' organization has already addressed some of the problems of 'open manufacturing' (2009).⁶ Whether or not peer production can build a nuclear reactor is not the issue. Commons-based production is not intended to be analogous to the existing real economy (though there is nothing to prevent it entering areas such as building design or the clothing trade). However, authors such as Tapscott and Williams immediately seized upon what peer production, under the new name of 'dispersed production', could do to assist firms in acquiring technical solutions for free, thus lowering costs and raising profits (Tapscott and Williams 2007). The 'Wealth of Networks' is digital and playing to its strengths, rather than mimicking highly capitalized production, is precisely what ensures that commons-based production remains both morphogenetic and socially integrative.

⁶In the first semester of 2014, Michel Bauwens was research director of the floksociety.org research group, which produced the first integrated Commons Transition Plan for the government of Ecuador, in order to create a 'social knowledge economy', with 15 associated policy papers. One version of the plan is available at http://en.wiki.floksociety.org/w/Research_Plan

Thirdly, **Virtual Communities** in the form of networking sites may indeed perform an integrative role through furnishing friendship, acceptance and understanding of distant others, in contra-distinction to the strong tendencies towards trivialization, stereotyped self-presentation and the devalued meaning of friendship encouraged by the commercial social networking sites. More important here, is the contribution of virtual communities in fostering new Corporate agents that emphasise reciprocity among members and perform the novel task of countering the individualism inherent in growing heterogeneity without endorsing the authoritarian bent of Maruyama's *heterogenistics* (1978). These new Corporate agents work by combining dispersed forms of specialist concerns into interactive support groups that are morphogenetic in influencing mainstream practices. In other words, they transform the isolated members of aggregates into agencies for mutual assistance at the micro-level and at the meso- and macro-levels can assume the form of Corporate 'single-issue groups'.

In health issues, for example, and especially ones involving relatively rare or embarrassing conditions, sometimes rebuffed by general medical practitioners and sometimes simply not recognized, the virtual community becomes the store of specialized knowledge, of advice, assistance and personal encouragement.⁷ Such initiatives have led healthcare providers to initiate their own sites for patients, who can direct their questions on-line to doctors.

Substantively different, but formally similar, are virtual communities that facilitate the coalescing of isolates and the articulation of new identities (for example, 'asexuals') (Carrigan 2011). If this illustration seems to be one confined to mutual assistance, there are plenty of cases where sites promote digital altruism by helping people to connect with voluntary associations, with civic engagement, to support 'concealed causes', such as the victims of human trafficking, which is where virtual communities interface with political pressure group activity and their acquired and shared knowledge is used to combat the ultra-right's false homogenization of those trafficked with 'illegal migrants'.

Obviously, this is where the virtual community impacts upon the politics of reform movements, speeding their mobilization,⁸ and on International Relations through well-known sites such as *Wikileaks* and *OpenLeaks*, whose impact Colin Wight discusses in Chap. 3. What has been accentuated here is *the digital proclivity to spawn new Corporate agents*, who are spearheading direct democracy and generically counteracting the 'individualism' proclaimed by several decades of sociologists, by relationally integrating the heterogeneity that intensified morphogenesis undoubtedly promotes and replacing lost sources of building trust and rebuilding social integration. Far from the meso-level becoming progressively evacuated, it is densely populated by these novel forms of Corporate agency – the agential

⁷One of my PhD students, Pamela Higham has explored this by e-interviewing for the female condition PCOS and for Psoriasis, where some of those meeting on the forum also graduate to holidaying together. When a woman with PCOS has an appointment upcoming with a new specialist, members send encouraging messages and want to know the outcome.

⁸'The Internet is tailor made for a populist, insurgent movement', wrote Joe Trippi (2004).

outcomes of the ‘double morphogenesis’ induced by the diffusion of digital science. Nevertheless, while the Corporate Agents involved may be numerous, they remain small in scale.

7.4.2.2 The Double Morphogenesis of Primary Agency

Collectivities of Primary agents (those sharing the same life chances) have undoubtedly become more heterogeneous, to the point where ‘the poor’ is now a disparate aggregate of those in such varied situations that ‘poverty’ is their highest common denominator. Add to this the falling membership of trades unions, of political parties, of voter turnout especially amongst the under 35 s, of newspaper readership, plus the 30 hours on average per week spent watching TV throughout Europe and it seems this adds up to the ‘passive agent’ in late modernity, those to whom things happen rather than those making things happen. Of course, there are counter-indicators, the most important being the growth of voluntary associations and the Third Sector in general.

Although far from free of their own motivational ambiguities, those responsible for the growth of the **blogosphere** in the 1990s cannot be deemed ‘passive’ and are largely interactive. In spring 2011, more than 156 million public blogs existed⁹ and have kept increasing exponentially because they help fuel one another. As an aggregate phenomenon, they have driven some respectable newspapers out of business and the other kind to illegal excesses (phone-hacking) to sustain readership. They challenge copyright, engage in political commentary in close to real time, raise inconvenient social issues, monitor the workings of public services as well as a host of self-serving purposes. There is no doubt that their existence enhances information diffusion and there is little that they have increased the public accountability of elected politicians, given these now rely upon ‘Twitter’ for making their personal and policy announcements. In other words, it is equally indubitable that the blogosphere is the home of certain Primary agents who are taking advantage of the *situational logic of opportunity* and together are exerting significant aggregate effects. However, although they have changed the environment in which all Corporate agents operate, the question remains as to whether or not their ‘direct action’ is cumulative in its aggregate effects.

In short, the conjoint result for the double morphogenesis of the ‘top down’ effects of finance capitalism’s attempted ‘recovery’ has done nothing to restore the absence of trust. Equally, the efforts of *digital diffusionists* to promote trust, co-operation, reciprocity and subsidiarity have produced green shoots, but not ones with vigorous growth. The public at large has been bombarded by mixed messages, which probably dampened the impact of both, preventing a radical *double morphogenesis*. However, I want to introduce a final synergistic consequence in conclusion.

⁹ Archived from the original <http://www.blogpulse.com/> on 04.06.2012.

7.5 Why Primary Agents Predominate

Unbridled opportunism has indeed induced a *double morphogenesis* because the continuing economic crisis has re-grouped the population of the developed world. Fifty percent of those in southern Europe are unemployed, most Europeans fear for their job security, occupational pensions are of diminishing value, some have had their houses repossessed and the young cannot get a mortgage to put them on the housing ladder, social security has been rolled further back, the cost of utilities rises and the burden of austerity measures leaves the poor worse-off, though professional incomes have also deteriorated in real terms.

All of these people have lost their previous vested interests; namely, those embedded in holding a given post with reasonable expectations of promotion and incremental salary increases or negotiated pay rises, and in supporting a particular political party or coalition because it represents their interests. Market and State have undermined both. The general public has lost its trust in public institutions as governance is increasingly dependent on so-called ‘performance indicators’ and ‘regulators’, in health, education and social services. Apart from the 20 % or so who scapegoat migrants for their woes, the majority now form a mistrustful bunch who do not even recognize themselves as stakeholders. Given this simultaneous breakdown of both system and social integration, why would they not pursue their *concerns* through the *situational logic of opportunity*?

To answer this, I want to stress the greatest ‘success’ of digital science and ironically the perverse triumph of *diffusionism*. It is not any of the four factors examined as the ‘bottom-up’ effects of digital diffusion, nor the indisputable achievements of *Wikipedia*, nor the macroscopic influence upon international politics exerted by *WikiLeaks* in general or Edward Snowden in particular. Instead, I want to suggest that it is something that (just) predated the economic crisis but also neutralized its potential for outrage producing change; something that was fundamentally parasitic upon the general loss of social integration, of trust and of meaningful relationality; and something that *infiltrated the life-world* of the majority, rendering them increasingly passive and inflating the ranks of Primary Agents.

This was the direct effect of the synergy constituting the generative mechanism that I have advanced, but that also ‘pulled the social order in two directions’. It is another warning against ‘clean breaks’ and, if there is anything in this thesis, it illustrates how the parties to the synergy may produce overall morphogenesis, but their components can operate morphostatically *vis-à-vis* one another, as Porpora maintains in his chapter. ‘Bread and circuses’ was the classic recipe for quietism, so let’s bring on the clowns in the guise of today’s great distraction.

E-mailing introduced *selective* connectivity, based on free-giving and reciprocity that made new ways of life possible. Prior to it, I could not have lived between three countries, edited this book from the foothills of the French Alps or maintained close friendships all over the world. Similarly, the mobile phone linked people together over distances and did/does good service for African agriculture and development in general. To begin with, the advent of social networking services (SNS) also

promised to build communities of shared interests, as opposed to shared geography, and to offset the loneliness that is the scourge of the developed world.

The prototypes of social networking services were up and running on the Web more than a decade before the economic crisis, with some such as ‘Classmates.com’ simply supplying e-addresses to those who had lost contact. The second generation became much more pro-active: *SixDegrees.com* (1997), *Makeoutclub* (2000), *Hubculture* and *Friendster* (2002). They were characterized by three new elements: some shed the dot.com self-avowal; the *quest* for new ‘friends’ was a novel thrust; and the accompanying presentation of ‘personal profiles’ became a central feature by the late 1990s. The latter was later described as ‘type yourself into being’ (Boyd and Ellison 2007) – with as ‘cool’ a self-presentation as possible – and did not come with the warning ‘what you read is not what you share’ (Byrne 2012) when compiling lists of ‘friends’. By 2005, *MySpace* was gaining more views than *Google*, and *Facebook*, launched in 2004, had become the world’s largest networking site by 2009. A national U.S. survey by the Pew Centre in 2011 found 73 % of on-line teenagers were using SNS sites, an increase on the 55 % of 3 years earlier (Lenhart 2010), and 47 % of adult Americans were users.

What accounts for this amazing rise as captured in recent user figures? By 2012, *Facebook* announced it had passed 1 billion monthly active users and 600 million active mobile users (73 % of the total user base). Last quarter it exceeded 700 million daily users. It is estimated to own 100 billion photos that have been posted by individuals. The key seems to open a lock with three tumblers: that this service, like most SNSs, charges no fee for joining or use, that it is inter-operative with mobile phones, and that it gains its revenue from advertising. It is the latter upon which I will focus first, because it is not self-evident why Swiss Air, for example, would choose to advertise there – on the face of it.

7.5.1 *Normalising Commercial Enterprises*

The answer goes beyond crude commercialization, as in pay up to be visible where the people are found, such as renting digital display boards in airports. This is the scatter-shot approach; one that can be seen for instance on ‘The Weather Channel’, a quite accurate site providing free forecasts covering the globe. However, it is obvious as I type ‘Evian-les-Bains’ into this US service that its adverts simply aim at the lowest common denominators of those wanting to know whether to carry an umbrella or a sunhat: weight loss, dating, and package holidays. Conversely, the synergy of our generative mechanism out-dates simple targeted advertising by the development of ‘network analysis software’ for data-mining. Most supermarkets and retailers like Amazon already use it: buy two pairs of shoes on-line and be surprised at what you are next offered. However, *Facebook* offers to dig deeper through its ‘Social Ads’ that tailor and sell the demographics and interests of its voluntary users to enable ‘bulls-eye’ advertising. It will also offer the results of

its own programme ‘Facebook Beacon’ to track the websites users have visited outside Zuckerberg’s domain.

That these activities continued to expand during the economic crisis itself is hugely important. Companies built ‘brand image sites’, merging business interests with digital advances, such as cloud computing, and the SNSs became on-line ‘reputation management tools’. In other words, they normalize and naturalize their presence, even if they happen to be selling financial derivatives. They also engage in some free interactive crowd-sourcing and herd the traffic onto their own on-line sites to these ends.

Returning to the contestation of Intellectual Property, paralleling all of the above has been the growth of U.S. Patents covering SNS technologies. There are now 3,500 published applications, representing a huge growth from 2003 to 2010, as shown in Fig. 7.3. Only about 400 of these have as yet been issued as Patents, owing to the backlog accumulated. Undoubtedly, social networking is big business. What Fig. 7.3 brings home is that its growth was not in the least diminished – on the contrary – as the economic crisis unfurled.

Thus, morphogenesis continued through the crisis, but in a manner that harnessed digital developments and their diffusion to *competition*. Although it has often been noted that the SNSs can catalyze public demonstrations, they work through disaggregation and re-aggregation for commercial purposes rather than fostering the development of new Corporate Agents spearheading the *opportunity*

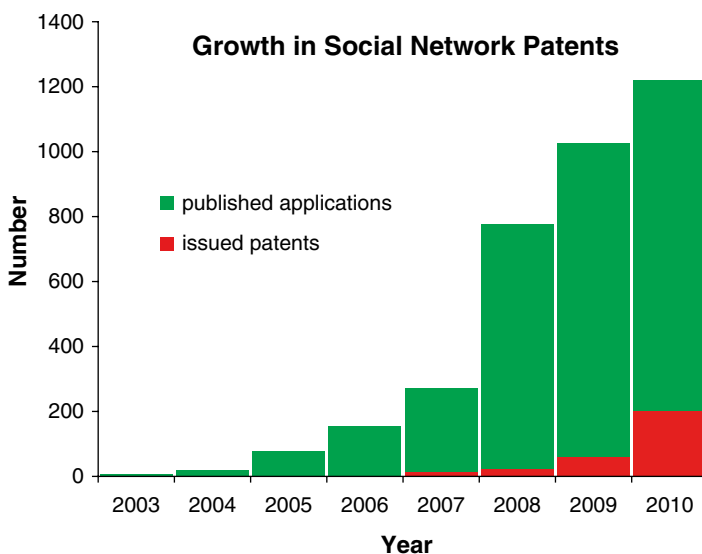


Fig. 7.3 Number of US social network patent applications published per year and patents issued per year (Source: http://en.wikipedia.org/wiki/Social_networking_service (downloaded 20.11.2013))

for oppositional regrouping. The *Occupy* groups were hardly durable beneficiaries of their capacity for mobilization or for collectively articulating new aims and objectives, despite Castells' (2012) peon to them.

7.5.1.1 Reinforcing the Passivity of Primary Agents

I have accentuated how the economic crisis undermined a variety of Corporate Agents and how this 'double morphogenesis' was assisted by the SNSs, but the influence of the latter went further because it not only militated against re-grouping into new Corporate Agents but constituted a morphostatic influence on agency in general by inducing passivity. This exceeded their impact as sources of pre-occupation and distraction (that have to be added to the time spent with the mobile phone and the homage still given to television, even if now streamed), all subtracting from time available for reflexive internal conversation. Increasingly, the most successful SNSs fostered a new form of intense 'presentism' among users. This is something I began to explore in *The Reflexive Imperative* (2012), terming it *événementalisme*, those whose temporal horizon was limited to today's events, with their responses reliant upon 'gut feelings', thus precluding the subject from designing a course of action; one that necessarily entails future time and the (fallible) understanding of how events and actions are linked (Archer 2012, pp. 277–291).

For Expressive Reflexives like these, 'their method of 'reducing variety', by attending to the pressing and the proximate is a response...governed by situational immediacy and intensity alone.' (Archer 2012, p. 281). The implication is that these subjects accept 'Shapeless lives' because, in effect, they have rescinded the agential power to become (something of) their own 'sovereign artificers' (Hollis 1987, pp. 1–14). Another way of putting this is that rather than making their way through the world, they ad hoc their way through it.

Although the media in general foster this tendency to view the social order as a succession of contingencies, as does centrist politics and public broadcasting, by remorselessly dwelling on today's 'scandal' – with the news becoming reminiscent of the first gruesome nineteenth century broadsheets – the SNSs have moved this tendency into top gear. Twitter, now number two in terms of users, introduced 'real time' services (in words), Clixtr followed (in pictures by streaming photos from an ongoing event) and Facebook joined in with 'Live Feed'. This fixation on 'presentism' is at the expense of mentally contextualising causes and attempting to project consequences; in terms of (in)action, it generalizes the 'bystander effect' that Porpora discusses in Chap. 9. Reductions in thought and action increase agential passivity. Conversely, to seize upon *opportunity* always requires a thoughtful and active agent; to do so with societal effect require not merely active Primary Agents but those ready to coalesce relationally into Corporate agents, with effective organization and articulated aims that contest *événementalisme*. Last year, I took consolation from two young lads on the Lausanne métro whose tee-shirts read, 'You won't find me on Facebook: I have a Life'.

7.6 Conclusion

In the Introduction I maintained that we remained in the T²–T³ phase, where morphogenesis and morphostasis still worked together and implied that this phase will be long-lasting. I also argued against ‘clean breaks’ in which morphogenesis introduces some significant change and ‘immediately’ analysis shifts to the forms of morphostasis reproducing it. One lesson from this excursion into popular digital diffusion and its colonized perversion is that the two processes intertwine because I do not see the intensification of passive Primary agency as an unintended consequence or perverse effect; it is too convenient to be merely contingent. The result is to protract Late Modernity and to delay T⁴ at which a Morphogenic social formation could conceivably be reached. The challenge as far as the generative mechanism advanced is concerned is whether or not conditions can be specified under which ‘synergy’ would not buttress the status quo. These would need to be such that the prevailing form of ‘double morphogenesis’ is reversed and ceases to generate an ever growing pool of passive Primary Agents, lacking the social integration to coalesce into Corporate Agents and engage in relational contestation.

References

- Archer, M. S. (1988). *Culture and agency*. Cambridge: Cambridge University Press.
- Archer, M. S. (1995). *Realist social theory: The morphogenetic approach*. Cambridge: Cambridge University Press.
- Archer, M. S. (1996). Social integration and system integration: Developing the distinction. *Sociology*, 30(4), 679–699.
- Archer, M. S. (2012). *The reflexive imperative in late modernity*. Cambridge: Cambridge University Press.
- Archer, M. S. (2014). The generative mechanism re-configuring late modernity in her (ed) *Social morphogenesis*, Vol. II, Chap. 5, *Late modernity: Trajectories towards Morphogenic Society*. New York: Springer.
- Bachmann, R. (2011). At the crossroads: Future directions in trust research. *Journal of Trust Research*, 1(2), 203–213.
- Bauwens, M. (2009). The emergence of open design and open manufacturing. <http://www.we-magazine.net/we-vol02>
- Benkler, Y. (2006). *Wealth of networks*. New Haven: Yale University Press.
- Benkler, Y., & Nussbaum, M. (2006). Commons-based peer production and virtue. *The Journal of Political Philosophy*, 4(14), 394–419.
- Bitton, M. (2012). Re-thinking the anti-counterfeiting trade agreement’s criminal copyright enforcement measures. *Journal of Criminal Law and Criminology*, 102(1), 67–117.
- BlogPulse. (2011). <http://archive.is/XHRF>, 16 Feb 2011.
- Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210–230.
- Buckley, W. (1967). *Sociology and modern systems theory*. Englewood Cliffs: Prentice-Hall.
- Buitenhuis, A. J., Zelenika, I., Pierce, J. M. (2010). Open design-based strategies to enhance appropriate technology development. <http://nciaa.org/sites/default/files/pearce.pdf>
- Byrne, C. (2012). What you read is not what you share. <http://venturebeat.com/2012/08/23/bitly-realtime-hilary-mason/>

- Carrigan, M. (2011). There's more to life than sex? Difference and commonality within the asexual community. In *Sexualities* <http://sex.sagepub.com/content/14/4/462>
- Castells, M. (2012). *Networks of outrage and hope*. Cambridge: Polity.
- Chapman, A. R. (2002). The human rights implications of intellectual property protection. *Journal of International Economic Law*, 5(4), 861–882.
- Colledge, B., Morgan, J., Tench, R. (2014). The concept(s) of trust in late modernity, the relevance of realist social theory. *Journal for the Theory of Social Behaviour*; 44(4), 481–503.
- Economic effects of intellectual property-intensive manufacturing in the United States. <http://web.archive.org/web/20080216195041/http://www.the-value-of-ip.org/>
- Elder-Vass, D. (2010). *The causal power of social structures*. Cambridge: Cambridge University Press.
- Fisher, W. W. (1999). *The growth of intellectual property: A history of the ownership of ideas in the United States*. Göttingen: Vandenhoeck and Ruprecht.
- Hollis, M. (1987). *The cunning of reason*. Cambridge: Cambridge University Press.
- International Labour Organization. (2012). *Global estimate of forced labour: Results and methodology*. Geneva: ILO.
- Jefferson, T. (1813). Letter to Isaac McPherson. http://presspubs.uchicago.edu/founders/documents/a1_8_8s12.html. 13 Aug 1813.
- Khandani, A., & Lo, A. (2007). What happened to the Quants in August 2007? <http://ssrn.com.id-1015987>
- Lenhart, A. et al. (2010). Social media and young adults. <http://pewinternet.org/Reports/2010/Social-Media-and-Young-Adults.aspx>
- Maruyama, M. (1978). Heterogenistics and morphogenetics: Toward a new concept of the scientific. *Theory and Society*, 5(1), 75–96.
- Morgan, J. (2013). Hedge funds: Statistical arbitrage, high frequency trading and their consequences for the environment of businesses. *Critical Perspectives on International Business*, 9, 377–397.
- Morgan, J., & Negru, I. (2012). The Austrian perspective on the global financial crisis: A critique. *Economic Issues*, 17(2), 22–55.
- Open Source Summit. (1998). http://linuxgazette.net/issue_28/rossum.html. (downloaded 25.10.2012)
- OpenSourceMalaria. (2014). <http://openwetware.org/wiki/OSDDMalaria>. (downloaded 18.03.2013)
- Poeter, D. (2012). Could a 'Printable Gun' change the world?. <http://forbes.com/sites/andygreenberg/>. (downloaded 27.08.2012)
- Project Gutenberg – free ebooks. (2014). <http://www.gutenberg.org/>. (downloaded 25.10.2012)
- Rennie, L., & Wellman, B. (2012). *Networked*. Cambridge, MA: MIT Press.
- Sawyer, K. (2005). *Social emergence: Societies as complex systems*. Cambridge: Cambridge University Press.
- Sonderholm, J. (2010). Ethical issues surrounding intellectual property rights. *Philosophy Compass*, 5(12), 1107–1115.
- Stiglitz, J. (2003). *The roaring nineties*. New York: Norton.
- Stulz, R. (2007). Hedge funds: Past, present and future. *Journal of Economic Perspectives*, 21(2), 175–194.
- Tapscott, D., & Williams, A. D. (2007). *Wikinomics: How mass collaboration changes everything*. London: Atlantic Books.
- The Tropical Disease Initiative (2014). <http://www.tropicaldisease.org>. (downloaded 25.10.2012)
- Tiemann, M. (2006). 'History of the OSI', open source initiative. <http://www.opensource.org/history>
- Trippi, J. (2004). *The revolution will not be televised*. New York: William Morrow/HarperCollins.
- Wharton, D. (1992). MPAA's rebel with cause fights for copyright coin. *Variety*, 348, 2.
- Wikipedia. (2013) 'Open Source', p.1. http://en.wikipedia.org/wiki/Open_source. (downloaded 13.11.2013).
- Wikipedia. http://en.wikipedia.org/wiki/Social_networking-service. (downloaded 20.11.2013)
- World Intellectual Property Organization. (2002). *Human rights and intellectual property*. <http://www.wipo.int/tk/en/hr/>

Chapter 8

Turbulence and Relational Conjunctures: The Emergence of Morphogenic Environments

Andrea M. Maccarini

8.1 Social Mechanisms and the Direction of Social Morphogenesis

The aim of this chapter is to explore one particular way in which current social dynamics may be developing into a ‘morphogenic¹ society’ (hereafter MS). My main concern is to outline some substantive features such an emerging societal formation could exhibit. A strictly related point, at the analytic level, is the assumption that the notion of social mechanism is central to such an enterprise. My take on this issue is to work on the conjuncture among various mechanisms that coalesce to generate different niches or ‘environments’ within the global society at large. Such environments are possibly characterized by mutually opposed features, whilst resulting from the main generative mechanism. More precisely, the thesis I will illustrate is that the force of intensified morphogenesis – resulting from the institutional configuration of contingent complementarities and the related logic of opportunity² – is shaping organizations and big institutional complexes into social forms that could be described as ‘enclaves’, ‘vortexes’, and ‘seed-beds’. These in turn have their own structural and cultural emergent properties, and influence the quality of social life in the emerging MS.

¹I will use the word ‘morphogenetic’ to refer to the intrinsic tendency of all human societies to generate and change (social) forms, while I call ‘morphogenic’ the specific societal syndrome characterized by the situational logic of opportunity, stemming from ‘unbound morphogenesis’ (signifying one unfettered from morphostasis) and leading to a wholly novel societal formation.

²These concepts are taken from the conceptual toolbox of the morphogenetic/morphostatic approach (M/M) first spelled out by Archer (1995).

A.M. Maccarini (✉)
Department of Political Science, Law and International Studies,
University of Padova, Padua, Italy
e-mail: andrea.maccarini@unipd.it

The present chapter starts where my previous contribution left off in Volume II (Maccarini 2014). The path I have begun to follow consists of a few, cumulative steps: it entails (i) identifying generative mechanisms possibly leading to a ‘new’ societal formation, (ii) tracing some relevant emergent phenomena to such mechanisms, and (iii) establishing their complex mutual connections to draw a synthetic picture. This might finally lead us to decide whether any claim that a new type of society is being born can be warranted. Here I will take up point (iii), which I had only tentatively gestured to in my previous essays. I have already shown that a state of total mobilization is very close to the notion of unbound morphogenesis,³ and examined a few, interwoven social phenomena which have a manifest, non random, but systematic connection with the core mechanism of a MS. In this connection, one key issue in Volume II turned out to be whether or not this situation entails any possibility of successful reintegration, i.e., whether or not it is possible for the coming morphogenic formation to find a healthy balance between change and stability by establishing new social, political and legal institutions which could bring about a new social equilibrium. The MS would thus involve a huge process of balancing, institution building, constitutionalisation, and processes through which new types of social subjects emerge. As I hope I can demonstrate, the idea of social enclaves and vortexes addresses precisely this issue.

The chapter is organized as follows. As mentioned above, the concept of social mechanism plays a crucial role in this context. However, the scholarly objective of this paper is neither to review, nor to refine or advance any formal theory of mechanisms, but to put this concept to work in the study of some relevant social processes. Consequently, I will not discuss the vast array of theoretical approaches to causal mechanisms currently available in the social sciences.⁴ In the next section (Sect. 8.2) I will simply lay out a working definition and explain how such a concept can serve to make my substantive points. Having made this clarification, in Sect. 8.3 I will spell out my main argument at some length and illustrate the conceptual tools with which I am working. The focus will be on the ideas of *enclave* and *vortex* as particular types of social ‘environments’, and on why I find them useful within the theoretical framework of the M/M approach. In Sect. 8.4 I will present a map of emergent entities, and then clarify the way in which their interrelations, under particular structural and cultural conditions, act as higher-order mechanisms giving rise to social forms that may be usefully characterized as enclaves or vortexes.⁵ Presenting detailed examples would require specific case studies. All I can hope to accomplish here is to argue for the existence of structural and cultural trends that mould some social forms into those shapes, and to uncover some of their implications for the possible profile of the coming MS. Finally, in Sect. 8.5 I will draw some provisional conclusions about the emerging societal formation, pointing to a few particular issues that call for further study. Among such issues, special attention should

³For the concept of unbound morphogenesis see Archer (2013).

⁴See the chapters by Pierpaolo Donati (Chap. 4) and Philip S. Gorski (Chap. 2) in this volume, which provide fresh perspectives on this theme.

⁵The kind of environment I term a ‘seed-bed’ will only be hinted at here.

be devoted to how values and norms adapt to and co-evolve with the new societal syndrome.

8.2 On the Concept of Social Mechanism

The concept of mechanism is now quite fashionable in the social sciences and in epistemology at large.⁶ More particularly, *social* mechanisms are currently at the center of theoretical attention⁷ and are evoked as the explanation of a wide range of social phenomena.⁸ The concept of social mechanism also plays an important role in the main argument of this essay. The emergent social entities presented in Sect. 4 are meant as both outcomes of social mechanisms and potential components of further mechanisms. Therefore, this chapter must open with a definition of what is meant by social mechanism in the present context. However, my objective here is not formal, but substantive theory. Thus, my brief discussion will be focused upon a few points I deem to be essential for the approach I am following.

Broadly speaking, we could maintain that “[T]he mechanisms position aims at ‘something intermediate between laws and descriptions’, or as HS [Hedström and Swedberg] put it, ‘between universal social laws and story-telling’”.⁹ Most authors consider mechanisms to be some sort of middle ground between the positivist search for law-like generalizations to be used as premises in covering-law explanations and the interpretivist satisfaction with narratives and descriptions alone.

Following Darden,¹⁰ a mechanism *scheme* can be defined as “a truncated abstract description of a mechanism that can be filled with more specific descriptions of component entities and activities”. In a more articulate way, according to Charles Tilly’s account (2001), explanation by mechanisms must be regarded as one of the main explanatory strategies adopted in the social sciences as well as in social history. Apart from the explicit denial of the possibility of serious explanation in the social

⁶I do not review all the relevant nuances in the literature on mechanisms. For a discussion of the main epistemological issues concerning the ‘mechanistic’ view see Bunge (2004); the same journal issue includes important essays on the same topic by Renate Mayntz and Colin Wight. See also Hsiang-Ke et al. (2013), Craver (2007), and Machamer et al. (2000). The work of Roy Bhaskar is obviously relevant as the original critical realist position on this theme. For a useful summary see Hartwig (2007: 57–62).

⁷My discussion here draws mainly on the following sources: Hedström and Swedberg (1998), Hedström and Ylikoski (2010), and Demeulenaere (2011). For a critical view of the ‘analytical’ take on mechanisms see: Abbott (2007) and Norkus (2005). A theory of social mechanisms within historical sociology is laid out by Gorski (2009). For a pragmatist view cf. Gross (2009).

⁸Just a few examples need to be mentioned here: Goodman and Jinks (2013a), Guzzini (2012), Kolins Givan et al. (2010), McGloin et al. (2011), Pierson (2004), and Thorntorn et al. (2012).

⁹Abbott (2007: 3), where ‘HS’ stands for ‘Hedström and Swedberg’; see also Gorski (Chap. 2), in this volume. This is also why deterministic accounts of social mechanism are inevitably self-defeating.

¹⁰Cf. Darden (2006: 281).

and historical realms, Tilly mentions as contenders: (i) the covering law model, whereby researchers try to establish robust empirical generalizations, tracing them to overarching laws; (ii) the propensity view, in which researchers explain social phenomena by the inner states and propensities to act on the part of individual actors; (iii) the system view, which explains facts by identifying their functions within a social system; and finally (iv) the mechanism view, which is held to differ from all the rest. This latter strategy consists of decomposing “unique sequences of alterations in relations among connected elements”, called episodes, into recurring processes and mechanisms.¹¹ Mechanism based explanations involve selective, theory oriented accounts of episodes, accentuating their salient features, which try to explain their differences and similarities by identifying a relatively regular pattern within them. Now it is true that any theory oriented account must involve some separation of necessary versus contingent elements within observables. In the above formulation, though, such a definition sounds too close to an inductive move towards the identification of a ‘law’ to be making a real difference. In addition, episodes are sorted out and bounded by processes Tilly calls ‘social constructions’. The latter is an intriguing point that prompts the question whether or not Tilly would have been in agreement with a realist position, particularly with the M/M approach to social theory. It is obviously the social scientist who decides where morphogenetic/morphostatic cycles begin and end, and which particular entities or events enter morphogenetic narratives. For Tilly, participants and observers sort out myriads of events in social life. However, only some fraction of events acquire social significance because the relevant subjects give them names, draw boundaries, and tell stories about them. But does this mean that social and historical periodizations are nothing but mere conventions¹²?

Be that as it may, one thing all versions of the mechanist approach to explanation have in common is that they oppose any conception of causation as a statistical correlation that identifies causal relations with controlled statistical dependence between variables. As we will shortly see, this has an important consequence in terms of the epistemological presuppositions made.

With this said, four points are essential to my view of a social mechanism:

1. *social mechanisms do not entail methodological individualism.*

It is true that the mechanist approach involves a specific move, which consists in seeking explanation for any given *explanandum* at a lower level. Opening up the ‘black box’ of empirically observable regularities (or correlations between macroscopic variables) means explaining ‘larger’ phenomena with ‘smaller’ ones. Nevertheless, such a ‘lower level’ and these ‘smaller units’ do not consist of individuals per se, but may well refer to social relations and their properties, as well as to individual agency with its own personal emergent properties. According to Tilly, who argues for a form of relational realism “with transactions, interac-

¹¹Tilly (2001); see also Tilly (1997). His theory of social mechanisms has been further elaborated in Tilly (2006, 2008).

¹²For a refined treatment of this issue, which cannot be followed up here, see Abbott (2001).

tions, or social ties serving as starting points of social analysis”,¹³ relational mechanisms are synonymous with patterned, non-random alterations in the relations among individuals, networks, and groups.¹⁴

2. *social mechanisms (can) involve an anti-empiricist epistemology.*

As hinted above, the idea of causation as statistical correlation is an adaptation of the Humean analysis of causal relations as regular associations, and was prevalent in quantitative social research until the 1980s. This means that the mechanist perspective should, or at least *can* be consistent with an anti-empiricist philosophy of science.¹⁵ In this respect, the sociological landscape is not homogeneous. ‘Analytical sociologists’ like Hedström and Swedberg insist that mechanisms bring about regular outcomes, or they could not be called mechanisms in the first place.¹⁶ According to these authors: “One should identify the situational mechanisms by which social structures constrain individuals’ action and cultural environments shape their desires and beliefs (...), describe the action-formation mechanisms linking individuals’ desires, beliefs, etc., to their actions (...), and specify the transformational mechanisms by which individuals, through their actions and interactions, generate various intended and unintended social outcomes (...). Only by understanding the whole chain of situational, action-formation, and transformational mechanisms have we made sense of the observed macro-level relationship”.¹⁷ This statement is probably as close as it could ever get to Archer’s formulations concerning the situational logic, reflexive agency, and their interrelation that is ventured as constituting the basic transformational mechanism of social morphogenesis or reproductive mechanism of morphostasis. But even here, to Hedström and Swedberg, the causal mechanism generating the output Y from the input X is constituted by a number of intermediate causal links that regularly generate the expected outcome. Realist accounts, on the other hand, do recognize the necessity of internal relations, but emphasize the contingency due to (i) the multiplicity of mechanisms simultaneously at work, and (ii) the open character of society to other external factors. In a nutshell, because the *ceteris paribus* clause is never respected in the social realm, a mechanism does not necessarily bring about regular outcomes, even if it *potentially would* were closure possible. It is important to note that such a position clearly differs from Elster’s idea that mechanisms are just ‘sometime’ things, that is, things that only *sometimes* happen. The point is not that mechanisms are just

¹³Tilly (1997: 47). This passage is cited in Norkus (2005: 366).

¹⁴See Donati, (Chap. 4) in this volume, for a relational theory of social mechanisms.

¹⁵*Contra*, Demeulenaere (2011: 19).

¹⁶See, however, Ylikoski (2011), according to whom such a claim would only apply to what he calls ‘A-mechanisms’, namely regular processes, and not to ‘B-mechanisms’, i.e., to more abstract causal schemes.

¹⁷Hedström and Ylikoski (2010: 59).

‘weaker laws’, but that they specify the relations and processes through which the outcome would be brought about, were it to act alone within a closed system. That is to say, mechanisms should not be conceived of as attenuated and under-specified law-like generalizations, but as entities and activities working in an entirely different way.

3. *social mechanisms are not synonymous with the causal power(s) and tendencies of a single entity.*

This point is much more controversial, even within the conceptual framework of critical realism, insofar as it subscribes to the view that a generative mechanism can consist of one causal power, with or without the related tendency. The point I am making here is that explanatory models should be conceptually parsimonious. Now, why should we speak of a ‘mechanism’, if all we do is simply refer to an entity X which exercises its causal power, (potentially) causing another entity or event to happen? Why couldn’t this just be described as a ‘causal relation’? If we are dealing with a *tendency*, we would not need anything more. Therefore, I consider the term ‘mechanism’ to be properly used only when it identifies mutually intertwined causal powers. So, entities all have their own causal *powers* and *tendencies*, but only when the causal relations leading from an X to a Y entail the *interaction of more than one* power and tendency can we speak of a (*generative*) *mechanism*. Mechanisms are indeed causal combinations, but we usefully call them mechanisms only when more than one causal tendency, inclination or intentional action is involved, which could lead to a possible outcome. This is consistent with the observation that entities – e.g., human agents – are endowed with various different inclinations and tendencies, all having causal effects, but *none of these alone* can bring about a determinate outcome. To give a simple example: a man in a dangerous situation can fight, flee or freeze. He incorporates, and indeed may exercise, tendencies pushing him in all these directions. What his actual action will be in a given situation must be co-determined by the *other* relevant features of the situation – all other conditions, causal powers, intentions and contingencies at work. Only this set of tendencies can make a *causal complex* that is robust enough to be called a *mechanism* – which by definition involves some regularity of connection, though not of empirically observable outcomes.

4. *Lower- and higher-order mechanisms exist, strictly connected to different levels of reality.*

Mechanisms, like relationships, build upon each other, generating and defining levels of emergence. While social mechanisms are never deterministic, their increasing complexity multiplies contingency. Thus, their expected outcome will be even more difficult to *predict*. On the other hand, once we can really get to an account based on complex, second- or third-order mechanisms, then our understanding of the issue in question will be correspondingly improved.

8.3 Enclaves and Vortexes as ‘Morphogenic Environments’: A Thesis and Its Working Tools

From our viewpoint in space and time, the pivotal questions for a social scientist who wants to explore the hypothesis of an emerging MS may be the following: once we have identified a core mechanism that serves as the ‘first motor’ of intensified morphogenesis, where are we along the path that is possibly leading to a complete societal reconfiguration? And once we set out along that path, what is the rapidly changing landscape beginning to look like? To put this in more technical language, what are the social emergents and entities, with their own ‘qualities’ (i.e., emergent properties), and, are they starting to reveal anything like a latent pattern beyond purely contingent convergences? These questions constitute a thick bundle of problems, that should be tackled with some analytic tact. I will not embark on any possible assessment of ‘how advanced’ the morphogenetic syndrome is at present, but will try to catch a glimpse of its profile from the mist of long term social trends.

My most basic assumption is that the MS is not going to be a seamless garment. The present considerations entail rejecting evolutionist views, do not endorse a smooth process of diffusion, and are skeptical of popular images that convey the idea of a ‘flat world’.¹⁸ Even my own reference to a latent pattern (above) should not be taken as the notion of an orchestrating principle (or structural force), but as the consistent outcome of a partially contingent process.¹⁹ The morphogenic logic tends to spread, yet global society still remains highly differentiated in terms of structural and cultural conditions characterizing organizational systems, industrial sectors, geographical regions, peoples, and communities. The same goes for agents and groups. As a result, there is no ‘social synchrony’ among the areas of global society, not even in the West, despite the ongoing partial synchronization of expert systems.²⁰ Moreover, no homogeneous outcomes can be predicted as to the social forms the MS will foster – or hinder. Therefore, the march toward a societal formation we could call ‘morphogenic’ can be conceived of as a stepwise process, whereby mechanisms produce emergent properties and entities, and these gradually coalesce to generate new ‘environments’, i.e., ‘parts’ or ‘islands’ of society (organizational sectors, inter-institutional complexes, regions, etc.) that are in tune with the morphogenic logic. The scale of such innovations tends to increase, as well as do further links among them, and the eventual outcome would be a whole ‘society’ in which all the main processes finally work according to that logic. The argument I am pre-

¹⁸Friedman (2006).

¹⁹This approach is consistent with Archer’s claim that “Social Realism always respects the fact that such potentials may remain unrealized because of (a) countervailing mechanisms at work and also (b) unforeseen contingencies that cannot be excluded from the open system of society” (see Archer’s contribution, Chaps. 1 and 7 to this volume).

²⁰To put it bluntly, although expert systems may well work synchronically and predictably when checking flights or e-finance operations, this does not mean that *social* morphogenesis will also display such a smooth and standardized process. More commonly, globalized systems are often ‘out of sync’.

senting builds a gradual path to the characterization of a whole societal formation, and could be outlined as follows.

- (i) The morphogenetic ‘engine’ generates various emergent phenomena, in all social domains and on various levels of social organization. Some of them are *internally* related to the core mechanism of ‘contingent complementarity’, others are only indirectly connected with it. As a consequence, different types of interactions are possible. Some of the newly emergent social entities interact randomly, contributing to increased chaotic complexity, and resulting in a ‘fallout’ of random effects due to the causal powers all social emergents have. This means there are indeed causes and effects, but the overall impact of contingently related phenomena is not systematically consequential. Every emergent social entity can be traced to some social mechanism. At the same time, every social entity might itself become a part of further mechanisms, producing other phenomena on different levels.²¹ Here I will not deal with those mechanisms and social forms that are not internally (i.e., necessarily) related among themselves and with the core logic of opportunity.
- (ii) However, other emergent phenomena may exhibit a clear mutual compatibility and may come to establish necessary relationships, producing new, higher order mechanisms or activating existing ones, and thereby moving along new developmental paths. I call such relationships structural *conjunctures*, which in turn constitute higher-order mechanisms.²² The concept of conjuncture calls attention to the fact that higher-order relationships – that is, relationships among phenomena that are originally constituted by social relations in the first place – and the convergence of multiple social mechanisms may give rise to more complex social forms.²³ Here, I focus on these chains of mechanisms, and on their emergent effects.
- (iii) The outcome is the relative stabilization of various ‘environments’ of different geographical and systemic dimensions – organizational, inter-organizational, etc. – involving consequences on different levels of organization: lifestyles, interaction, institution building and performance, political regime, and many more.

My particular interest is in environments generated by the morphogenic hallmark of variety generating more variety. They represent social forms that are both generated by and creatively reacting to the conditions of unbound morphogenesis. Therefore, I call them ‘morphogenic environments’. These social forms can differ

²¹ This statement is meant to include downward causation.

²² This point needs clarification as regards the concept of social mechanism, and the notion of mechanism-related levels of (social) reality. See Sect. 8.3.

²³ My use of the term ‘conjuncture’ is similar to its common usage in critical realism. See Bhaskar (1998, 2008)³ and Hartwig (2007: 76). With reference to the latter, I take the meaning of conjuncture to be a combination of events and circumstances that is critical or betokens a crisis, with some abstraction and generalization, namely as a set of mechanisms that are critical to generate particular social outcomes. See also: Douglas V. Porpora, Chap. 9 in this volume, p. 172; Steinmetz (1998).

in many respects. They are endowed with their own particular features, among which their particular ways of coping with contingences, and they change according to the structural and cultural conditions within which the relevant conjunctures unfold. The point of taking such a perspective lies in developing a pluralist view of the emerging substantive qualities of what could finally become a whole societal formation. The logic of unbound morphogenesis is still not dominating all social processes, but it is *spreading unevenly throughout global society, generating 'regions' where it is more intensely realized and recognized, and giving rise to qualitatively different social forms in response to its pressure.*

In this chapter I am concerned with two particular types of social forms, namely with ones we can call the 'enclave' and 'vortex'. I am claiming that enclaves and vortexes can be fruitfully used to describe some particular shapes into which the morphogenic process is crystallizing. This is emphatically not to say that the overall 'destiny' of the coming MS will be a world of enclaves and vortexes. These are only two possible – and possibly unstable – outcomes that are currently emerging at some latitudes and longitudes of our social globe. It is now time to explain where these concepts come from, and what they have to do with an M/M approach.

I draw the concepts of enclave and vortex from the literature on organizations and management, more precisely from the work of McCann and Selsky.²⁴ In taking up the intuitions produced by these authors, I will partially change their meaning, as a result of translating them in terms of the M/M approach. In other words, we can set out an M/M conception of a research tradition that studies the impact of growing complexity on different kinds of social environments, even on societies and civilizations at large. The usefulness of this operation lies in two, mutually related aspects:

- (i) that the related organizational literature has provided concrete examples of different directions that social morphogenesis may take, precisely when its main features make it resemble the 'morphogenic' condition;
- (ii) that such studies allow us to model morphogenetic/morphostatic cycles,²⁵ comprising gradual change, catastrophes and sudden collapses, social de-generation and re-generation.²⁶ In other words, they describe and model the possible 'rhythm' of social morphogenesis within particular time spans, characterized by given conditions and structures, in concrete case studies. The pivotal concept of the whole argument is that of *turbulence*. Such a word has become a fashionable way to characterize the 'times we are living in'. As a metaphor for allegedly unprecedented challenges and complex situations, it has inspired talks and

²⁴McCann and Selsky (1984) and 2012. The following reconstruction draws upon their work. The relevance of their 2012 volume has yet to be assessed in the context of a theory of reflexivity.

²⁵Cf. Maccarini (2013a).

²⁶It remains a matter for future speculation whether or not there are inherent 'limits' to morphogenesis, after which collapses or catastrophes become necessary to rebuild capacity and to start a new morphogenetic cycle – e.g., a new civilization. The 'society without an outside' is precisely a society that has lost a quite specific (kind of) asset, namely the 'space' in which to expand and grow – the material social morphogenesis can burn, or the place where it can develop. But on this point metaphors still have to give way to sound conceptualization.

even big conferences in the social sciences.²⁷ Thus, it would seem that our society is becoming more aerial than liquid – or dusty, for that matter. Maybe this only indicates the increasing difficulty of global society in providing an adequate self-representation.

Leaving metaphors aside, McCann and Selsky identify the two driving forces that promote turbulence as follows:

- (a) an escalating scale and density of social interaction brought about by population growth and its demands;
- (b) increasing, but uneven, technological innovation that is diffused through all aspects of social activity.

These two forces result in more numerous and interdependent, but less stable and predictable, relations among the parts of an environment. High levels of complexity and change are a necessary, but not sufficient condition for understanding turbulence. An environment is not turbulent as long as a member has the requisite resources and skills to meet the demands the conditions impose. Only when such conditions become truly problematic – that is, when the level of ‘relevant uncertainty’ confronting a member makes continuing adaptation correspondingly uncertain – can the label ‘turbulent’ be assigned to an environment. This is to say turbulence is not an objective threshold state passed through by all members of an environment in the same way or at the same time. The factor making turbulence an unevenly experienced condition is the relative adaptive capacity of members. Hyperturbulence, then, is the condition in which environmental demands finally exceed the collective capacities of members sharing an environment to cope with growing complexity. A good example concerns Italian firms in the context of the so-called ‘new globalization’ marked by the ongoing unbundling and fragmentation of productive systems. This resulted in the further differentiation between trade-in-goods and trade-in-tasks and the creation of complex global value (supply) chains. The firms that were already struggling to survive, given global competition and a national environment characterized by high taxes and inefficient administration, have performed differently in the face of the commercial crisis of 2008–2009, according to their ability to upgrade their position in those chains and to govern their relationships with the neighbouring links. Some of them could not control all internal and external relationships, and were ‘caught’ by a dominant buyer (Accetturo et al. 2011). Hyperturbulence can lead to what McCann and Selsky, reminiscent of Emery and Trist, call a ‘vortical environment’, that is an environment shaped by forces totally beyond management.²⁸

At that point, highly bounded domains may develop, called enclaves and vortices. They result from a process of ‘social triage’, that is an effort by members

²⁷ For example, the 10th conference of the European Sociological Association, ‘Social relations in turbulent times’, Geneva, September, 2011, which prompted a bunch of papers that took up such a metaphor in their titles.

²⁸ For an interesting literature review on this topic cf. Baburoglu (1988).

to allocate and protect scarce resources and skills. Social triage involves a ‘manipulation of surpluses and scarcities’. More precisely, such a partitioning occurs when members attempt to allocate and protect an adaptive capacity they perceive as limited and overly challenged by increasing complexity. To keep to the previous example concerning Italian firms, some of them transferred all available resources to the successful functional or relational parts of their activity, separating and dismissing the rest.

Social enclaves and vortices are two different forms that may result from the above partitioning process. A social *enclave* is a domain of less turbulent, more manageable social space that is created and protected by one or more members who share a given environment. Enclave members selectively manage their relations, defending their shared domain from external demands. An enclave represents a bounded space members defend from non-members, and involves the effort to *de-couple* from external relations regarded as dangerous, because of the amount of resources they require. In other words, an enclave is formed when insiders successfully manage their relationships according to a highly selective principle. Following McCann and Selsky, three criteria for obtaining membership within an enclave can be listed: (a) the adequacy of a member’s current adaptive capacity; (b) its ability to contribute some value-added, i.e., a surplus of capacity, thereby helping to build the capacity of others within the enclave; and (c) the compatibility among the values and goals of prospective members. A macro-example here concerns the way the European Union negotiates the adherence and full membership of partner countries, which includes requisites concerning both economic performance and cultural values.

Vortices could be said to be the flipside of the same form. They are created when members within the larger environment attempt to isolate and contain hyperturbulence within a manageable, nonthreatening space. In this case, excessive turbulence is not being shut out, but kept within heavily patrolled borders. The reason why vortices arise is that there can be cases when the need for resources and skills within a given domain may be so great that members in the larger environment perceive the latter as a non-manageable threat to their own existence, viability, or well-being. A social vortex, thus, is created when some (individual or organizational) entities sharing an environment face a problem situation for which they perceive that no realistic solutions can be found, at least in the short run – or are not prepared to sustain the costs of an existing solution, and prefer to isolate the problem, keeping the domain concerned as far from themselves as possible.

Two further considerations are relevant here. First, the one characteristic enclaves and vortices have in common is that both forms imply that under (hyper) turbulent conditions, the gap between those who have and those who lack sufficient adaptive capacity will increase. The rate at which this gap grows will be a function of: (a) how quickly turbulence accelerates; (b) the amount of excess capacity within an environment; (c) the ability of members to minimize the dysfunctional consequences of their interdependencies with other members; and (d) the type and enforceability of prevailing ethical standards. Enclaves and vortices are two different ways to manage openings and closures, and arise as responses to growing com-

plexity, based on the attempt to avoid contagion with some sort of epidemic – keeping it within a delimited space ‘within’ or staying at a safe distance from it.

The second consideration is that the authors drawn upon regard cooperation within a vortex as close to impossible. They deem it to be highly fragile, episodic, and prone to major setbacks. Integrative strategies find no adequate resources – either structural or cultural.

Now, the way turbulence is described here appears to be close to the way Archer characterizes and accounts for unbound morphogenesis, examining the configuration of contingent complementarity and the situational logic of opportunity. In fact, the M/M approach may be linked to the notion of turbulence in more ways than one. First, it can provide a better account of what is new about the kind of ‘turbulence’ contemporary societies are experiencing. ‘Times’ have always been ‘rough’. But unbound morphogenesis and the relentless generation of variety means that technology and the growing density of social interaction per se are not the determining causal powers at play. This Durkheimian-like landscape must be further examined. The point is not just growing relational density, but the unconstrained freedom to develop creative combinations and opportunities for action and experience with (or indeed without) any normative grounding. In a nutshell, the morphogenic logic of opportunity is not just another way to spell the good old transition from ‘traditional’ to ‘modern’ societies.

On the other hand, the process of partitioning and the development of enclaves and vortexes represent instructive hypotheses about the direction social morphogenesis may take in particular domains and situations – that is, under particular forms of structural and cultural conditioning. Here the link between the M/M approach and the idea of turbulence lies in the fact that unbound morphogenesis really has different effects when it meets with highly dynamic or weak and previously static – let alone de-generating – systems.²⁹ In some cases it can be simply overwhelming, and this results in a breakdown of the capacity of the related systems to set their morphogenesis on a ‘generative’, not ‘de-generative’ path. When the opening of contingencies crosses the threshold of ‘relevant uncertainty’, as mentioned above, this makes social dynamics turbulent and partitioning – resulting in enclaves and vortexes – arising as a possible reaction. The reason why this is interesting is twofold. First, it helps to explain *why* the extremely dynamic environment fostered by a morphogenetic cycle can be paralleled by the crystallization of morphostasis in some niches within it. In a nutshell, this may constitute the starting point for an analysis of those cases in which not only ‘things stay the same’ (to put it in Porpora’s words, Chap. 9, in this volume), but social change may even slow down and stop, precisely in the wake of the emerging MS. Moreover, the pace of change may not be reduced in enclaves, but it will tend to remain within their borders, or will cross them only through highly selective channels. The point here is that the creation of ‘walled systems’, albeit internally dynamic, contradicts the expansive, diffusive logic that characterizes freewheeling morphogenesis.

²⁹About de-generation as applied to social forms, besides the references quoted in Sect. 8.4 below, see the Chap. 11 by Al-Amoudi and Latsis in this volume.

Again, we might add that the emergence of enclaves and vortexes must be reconstructed in a morphogenetic way. One consequence of this is that even the possibility of developing collaboration to face overly complex situations cannot be met with generalized skepticism. Unlikely as it might be, one always has to take the structural conditioning and the related situational logic into account – the particular resources actors can count on, and the reflexive agency, individual and social, acting upon the given situation. No real ‘situation’ exists without these factors, and this can make the claim about the low probability of cooperation too abstract and underdetermined. In our present theoretical context, we can assume that unchained morphogenesis has an ambivalent relation with cooperation, because the idea of synergy involves both cooperation and competition.³⁰

One last consideration is in order. If turbulence is a relationship between the complexity of conditions and the coping capacity of the subjects involved, then this calls into question the robustness and flexibility of their *modus vivendi* and the ‘maturity’ of their personal reflexivity. And the same argument may also come to embrace the collective reflexivity practiced and exhibited by organizations and institutions. What McCann and Selsky define as the capacity of an individual, group, organization, or inter-organizational collectivity to manage environmental complexity and change is contingent not only upon its own capacity, but also upon the capacities of those sharing the environment with it. This can be connected with Archer’s idea of contextual incongruity and mixed messages that make for the reflexive imperative. Actors not only cultivate concerns that are different from those held by significant others, but are also influenced by their capacity to reflect effectively, and to design effective life-plans within overly and increasingly complex environments. In the present context, what system theorists refer to as the capacity of adaptation would be translated into the reflexive capacity to select and shape a life-course in the face of enhanced variety. Because adaptive capacity refers to the amount and variety of resources and skills available to actors, we are warranted in claiming that reflexivity plays a crucial role among them. A good example is that the ability to understand complex, ambiguous situations and build adequate decision making models features among the relevant skills that are highly valued in complex, rapidly changing environments. This goes both for individuals and their families, on the one hand, and for organizations within an organizational and institutional environment, on the other hand – albeit in a rather different way, because the latter environment also includes competition as one key principle. All of the above calls for the extension of a realist-morphogenetic theory of reflexivity to consider the capacity of a whole social domain to sustain and nourish reflexivity, in its different modes and types.

To sum up, one aspect of the present morphogenetic situation is that it may result in overwhelming turbulence, which in turn may give rise to enclaves or vortexes – the last resort before the fading adaptive capacity of an individual or a collectivity collapses into widespread anomie and an ultimate loss of form. On the way to a

³⁰ Archer’s morphogenetic account of the synergy between market competition and the cooperative logic of diffusion, in this volume, may well serve as a clarification of this point.

possible MS, we are bound to encounter morphogenic environments, some of which will have the shape of an enclave or a vortex. What we are looking at here is a specific side of an enormously complex process. Another emergent environment, which requires ad hoc treatment, is the one I dub the ‘seed-bed’. Its main difference with respect to enclaves is its *outreach*. This choice of name is intended to cover the tendency of such social forms to expand and create relational bridges toward external social forms and groups, as well as their capacity to prompt internal solidarity and cooperation. The issue concerning the social quality of a morphogenic societal formation – the crucial question about what social life will be like if the MS finally becomes our social universe – must remain as uncertain as all statements about the future do. But the practical answer is already unfolding before our eyes.

8.4 Relational Conjunctures and Morphogenic Environments

Are vortexes and enclaves anything other than concepts within a theoretical model? Do they exist in social reality? The literature on organizations and management provides many empirical examples, but can this notion be of any interest with respect to the societal dynamics that are the object of the present considerations?

The first step of my argument consists of a provisional map of emergent social entities. Table 8.1 ventures an attempt to classify social entities according to different levels of emergence and of social organization.³¹ The scheme is obviously not exhaustive, but brings to the fore some relevant social facts, with the aim of providing an outline of social ‘novelties’ emerging on the skyline of global society.³²

³¹ For an illustration of the theoretical underpinning of this figure I must refer to Maccarini (2013b, 2014). The figure presented here is a new and amended formulation. Some word choice and a few substantive details differ from the former scheme. I note that my treatment of the category of ‘emergent events’, that was added in this new version, is reminiscent of the work by Sewell (1990). From an epistemological point of view, the scheme in question is ‘analogical-topological formalism’ in kind, with claims of similarities and principles of variation. For these notions see Tilly (2004a): 5.

³² The literature on such a vast array of phenomena covers various disciplines, and clearly exceeds any reasonable limit. I will only quote a few works, which played a crucial role in the development of my own perspective on the topics in question. For HETs and social acceleration, see again Maccarini (2014). On the concept of boundary change cf. Tilly (2004b). On smart governance see Willke (2007). On experimentalist organization, cf. Sabel (2006), Sabel and Zeitlin (2010). About new forms of social exclusion see Woodward and Kohli (2001). The phenomenon of new land enclosures is well documented in The World Bank (2010), <http://www.landcoalition.org/cpl/CPL-synthesis-report>. For case studies see <http://www.lancoalition.org/cplstudies>, <http://www.future-agricultures.org/index.php?option=comdocman&Itemid=971>, <http://media.oaklandinstitute.org/publications>, Anseeuw et al. (2012). About the mechanisms that tend to produce the QISM and the links between family organization and macro-social change see Axinn and Yabiku (2001). The degenerating tendencies of some Western institutions are studied by Ferguson (2011). An application to Italy may be drawn from Censis (2013). On the notion of ‘governance by standards’ see Thévenot (1997), Busch (2010). The connected themes of new legal frameworks, processes of constitution-

Table 8.1 Emergent phenomena in the transition toward a ‘morphogenic’ society

Levels of organization ‘Families’ of emergent entities	Interaction	Organization	Society
Emergent events (e.g., wars, crises, technical innovations, etc.)		Human enhancement techniques (discoveries and related challenges)	Economic crisis New forms of protests and unrest (e.g., ‘Arab springs’)
Emergent practices (lifestyles, styles of action, <i>routines</i> , etc.)	Accelerated and functionalized life course Technically mediated interactions (relations through social media etc.)	New organizational styles (new models for coordination of action)	
Emergent distributions (demographic distributions, social stratification, e.g., educational inequality)	New forms of social distinction (‘boundary change’: e.g., digital divide, moving vs. staying, etc.)		Demographic winter New forms of stratification, exclusion, and inequality within and between countries (e.g., new land enclosures, different structures of opportunities, generational divide, the NEET ⁺ youth)
Emergent structures (social and symbolic)		Experimentalist organizational forms (e.g., ‘pragmatist organizations’ in welfare services) Dis-emergence (or ‘degeneration’) of institutions in some advanced democracies (e.g., Italy)	New temporal structures: acceleration and functionalization (desymbolization) of time ‘Smart governance’ (societal level) Ongoing development of a human rights international regime; Anti-humanist culture (naturalism and radical individualism) New legal frameworks and routines (soft law, ‘governance by standards’)

(continued)

Table 8.1 (continued)

Levels of organization 'Families' of emergent entities	Interaction	Organization	Society
Emergent subjects (e.g., families, organizations, institutions and institutional complexes, societies, civilizations)	New social movements	Autonomous constitutional bodies	Post-democratic vs. polycratic regimes
	Plural family forms (e.g., QISM ^b)		
	New types of reflexivity (limitless, 'bulimic' self)		

^aBritish acronym standing for those people 'Not in Education, Employment or Training'

^bThe acronym stands for 'quasi-infertile serial monogamy', and it is meant to describe a lifestyle and cultural syndrome that is increasingly widespread in the West, particularly in some countries and among some given ethnic groups

All these emergents are caused by some mechanism, and in turn become themselves factors in a further chain of higher order mechanisms, potentially leading to the genesis of multifarious social environments. Events such as the discovery of Human Enhancement Techniques, the economic and financial crisis, and the riots in some Arab countries may have no necessary relationships. But other phenomena and mechanisms are consistently and systematically related with the morphogenic logic and its core mechanism.³³ Their *conjuncture* generates a bundle of strictly related mechanisms. We may thus venture to lay out some *strings* of emergent factors and processes as possible examples:

- (a) social acceleration, functionalization of time, HETs, anti-humanist culture, new family forms, demographic winter, new types of personal and social reflexivity;
- (b) economic crisis, forms of new stratification and exclusion, new land enclosures, dis-emergence of institutions, new forms of social distinction, riots and movements;
- (c) economic crisis, experimentalist organizations, smart governance, autonomous social bodies, expansion of human rights.

All these developments are mutually related, but both their internal links and their empirical outcomes are contingent upon the relevant structural conditionings under which they each occur, and the agency of individuals and groups. Primary or Corporate agency may disregard or take advantage of compatibilities, spread social innovations or oppose unwanted developments, forge or adhere to alternative cultures, etc. Social environments then emerge that are endowed with different social, cultural, and agential qualities (i.e., properties). As a result, lifestyles and the quality of life within these environments are bound to take different directions, depending on what mechanisms prevail.

The claim I have been advancing is that the morphogenic logic often results in a tendency to create enclave- and vortex-like environments. It is useful to recall some key features of such social forms, which could help to identify them and discern their profile within real social dynamics. As we have seen, enclaves and vortexes are the outcome of hyperturbulence. They occur when interdependencies among members have become dysfunctional and impossible to manage on a nondiscriminatory basis. Enclaves obtain when it becomes more efficient and viable to de-couple from those relations that limit one's capacity and to build those relations that promise to maintain capacity.³⁴ Vortices are created when members of a larger social group try

alisation, and post-democracy evoke the work of such authors as Gunther Teubner, Hauke Brunkhorst, and many more. For human rights cf. Goodman and Jinks (2013b). The concept of social subjectivities is treated by Prandini (2013).

³³For example, throughout the chapter cited in note 31 (Maccarini 2014) I explored the conjuncture between human enhancement techniques and social acceleration. To that essay I refer for bibliographic references on these topics.

³⁴“The rate and extent of enclave formation depends on: (a) the abilities of members to differentiate among their functional and dysfunctional relations; (b) the speed at which they can break off

to isolate and contain individuals and groups that lack the sufficient resources and skills required to cope with a challenging situation into a non-threatening, conveniently bounded space.

It is interesting to note that these partitioning processes exhibit some common features, such as an increased emphasis on resource efficiency, boundary management, and the regulation of consumption to maximize group, not individual, survival.³⁵ Of course, the whole process is dynamic. Enclaves can collapse, vortices can extend or shrink, depending on external conditions. These attempts to preserve and protect capacities have a clear meaning and effect in the short run. However, the long term effects are more uncertain. McCann and Selsky go on to say that such a process typically leads to the ‘involution of structures’, which we may liken to the ‘degeneration’ or dis-emergence of institutions.³⁶

At least some of the features we have invoked here can easily be found in some large processes, that should be reconstructed in detail through full-blown morphogenetic narratives. Here I can only quickly argue for their plausibility.

1. In her presidential address given to the ESA conference on *Social relations in turbulent times*, held in Geneva in September, 2011, Anàlia Torres tried to sketch a profile of what she saw as the great turbulence of our times. She put together the following ‘big events’: (i) the ‘financial war’ conducted by markets and rating agencies against nation-states and the euro; (ii) the global triumph of the neo-liberal model, attacking such institutions as the welfare state and the University; (iii) the erosion of the European social model and the decline of the whole European project; (iv) an accelerated pace of social change; (v) unprecedented riots even in formerly peaceful parts of Europe.

Arguably, the response by European institutions and national governments could be described as a tendency to generate enclaves and vortexes. The bulk of European governance – of the European project itself – has clearly become the setting of standards mainly concerning economic resources and performance,³⁷ to be used as requisites for full membership and enforced through sanctions that are guided by a logic of ‘immunization’ from the risk of contagion. The complex interrelation between technical standards and national interests would require a detailed study. The same logic seems to prevail with respect to immigration – *both* on the part of national governments and of some immigrant communities. Finally, a closure against European standards and a downgrading of

undesired relations by becoming self-sufficient or minimally dependent on others with needed capacity; and (c) their ability to create and enforce boundaries” (McCann and Selsky 1984: 466).

³⁵ Ibid.

³⁶ The term ‘disemergence’ can be found in Jamie Morgan’s treatment of emergence. See Morgan 2007: 166–167. Hartwig (2007) offers various entries that are relevant as critical realist treatments of the issue.

³⁷ Though not exclusively. The same rationale seems to apply to political stability, institutional efficiency, and the respect of human rights as well as of a growing set of rules and procedures on the part of members – concerning issues as different as immigration, food safety, patent rights, criminal justice, waste processing, etc.

the process of European unification is the battle cry of anti-European, nationalist and regionalist political parties and movements. In sum, the construction of enclaves – mirrored by vortexes arising wherever communities and countries cannot meet the required standards – appears to be the prevailing dynamics in European politics.

2. Within this European context, it's becoming commonplace to name Italy as an example of decadence. Few analysts, however, go beyond the usual reference to 'corruption'. Two important factors would deserve in-depth analysis, namely (i) the degeneration of institutions in the face of cliques and factions, and (ii) the slowing pace of social *morphogenesis*– in the proper sense of the emergence of new structures, cultures, and social subjectivities – paralleled by an accelerated growth of overwhelming complexity in most domains of social life. Italy would thus appear to be an example of a vortex, translating morphogenesis into chaotic fuzziness-without-change. The gap between the overly complex and rapidly changing global world and the fading structures, cultures and groups typical of Italy's first modernization has not yet been filled, and still accounts for much of the country's problems. Within the country itself different regions, social and professional circles, industrial sectors, etc. try more or less successfully to replicate the same logic of isolating problems and taking stock of their own resources. Examples could easily be drawn from the labour market, the longstanding problem of most Southern regions, and the domain of research and higher education. The latter may be quoted as a good instance of continuous reforms coupled with very slow change and weakening institutional and professional identities.
3. On a global scale, new boundaries arise everywhere in contrast to the flattening forces of the logic of diffusion. Following the era in which Western ways of life spread around the world, increasing entrenchment is prevailing. But new enclosures are more and more evident – from immigration policies even to raising physical barriers – in the West as well as in non-Western countries too, consistent with their emerging re-grouping and re-stratification according to economic growth rates.³⁸ One striking example comes from urban planning, with the increasing spread of 'gated communities', i.e., of residential areas with restricted access designed to privatize what are normally public spaces. These new residential areas occur in both new suburban developments and older inner city areas for the purposes of security and segregation (Atkinson and Blandy 2006), and currently involve millions of people in advanced countries like the USA, raising concerns for social integration.

In view of all these considerations, it is important to conclude that turbulence starts to generate partitioning strategies – and with them enclaves and vortical environments – precisely when competition prevails over cooperation. This all too

³⁸Australia vs. Indonesia and Pakistan vs. India are only two of the most evident examples. In the cultural domain, the diffusion of values is suffering serious setbacks, while rapidly growing non-Western countries like Russia, India, and China become increasingly vocal in asserting their difference on many issues connecting deep identity dimensions with concrete policy choices. The definition of the 'family' is a blatant example, although others may be adduced.

general statement becomes more meaningful if we read it in connection with Archer's argument about the intertwining logics of diffusion and competition, resulting in a delicate synergy that pulls the social order in two different directions.

The 'new' society of 'our' days is generating its new divides. Symbolic boundaries arise between opposite plans for the individual and collective future. The MS may speed up its transformation *vis à vis* human enhancement, pure contingency, and the ambivalent dominion of technique, serving both social control and individual desire. On the other hand, the complex of human rights may continuously expand, touching upon non-state actors and moving from lip service or principled acceptance to actual compliance; multiple creative, reflexive reactions may emerge in the domains of family life, labour, education, and others, against the loss of a minimum continuity, homogeneity, and stability of people's relational contexts – i.e., as a way to counter unbound contingency. However, this cultural variety will interact with those other factors that make processes of universalization versus retrenchment the most likely outcome. Social, political, economic, and cultural structures and processes in the coming MS may take the shape of a new wave of universalism as well as of uneven and fragmented worlds. What seems clear is that top-down processes are less available than ever to overcome barriers, old and new.

8.5 Conclusion

This chapter began from a substantive question and a main thesis. I asked what social forms are starting to characterize the morphogenic syndrome, and what social qualities we can expect them to exhibit. Along the way, the bullet points that should comprise the conceptualization of social mechanisms sketched were inserted.

I argued that the present development of the morphogenic logic is an essentially uneven process, which is giving rise to highly bounded social environments. The concepts of enclave and vortex, taken from the organizational literature and discussed in the light of the M/M approach, served as pegs upon which my analysis was hung, which proved an effective tool for understanding the dynamics of new boundary building and the fragmented landscape of global society. Enclaves and vortexes as social forms are more likely to emerge where the logic of competition supersedes that of (cooperative) diffusion. The coming MS is announced by coexisting developmental paths, defined by strings of higher-order mechanisms, giving rise to expanding or shrinking environments that work to different effects.

At least two tasks remain to be accomplished. One is to examine other possible social forms emerging from the same morphogenic situation, but characterized by their bridging and bonding capacity, which constitute the expansive side of the emerging MS. Processes of universalization are continually crossing the continually re-created and enforced boundaries. Capacity building and dissemination processes are opposing enclosures, and an emphasis on dissemination is contesting

immunization. These complex processes, guided by different relational mechanisms, constitute the field of tension of the novel societal formation.

The other task involves a consideration of what norms and values are being destroyed, preserved, or generated anew. What normative processes are still working, and what personal strategies are successful in the context of the areas and boundaries marking the structural and cultural landscape of the new world? In other words, how ‘unbound’ is ‘unbound morphogenesis’ going to be from normativity itself, its prompts and its restraints?

Moreover, the picture I have been sketching from a distance should be reconstructed in detail, unfolding the morphogenetic narratives typical of a given social and cultural domain. Nevertheless, I hope I have provided at least a few reference points for asking the basic questions, and have begun to give some very provisional answers.

References

- Abbott, A. (2001). *Time matters. On theory and method*. Chicago: University of Chicago Press.
- Abbott, A. (2007). Mechanisms and relations. *Sociologica*, 2, 1–22. doi:10.2383/24750.
- Accetturo, A., Giunta, A., & Rossi, S. (2011). Le imprese italiane tra crisi e nuova globalizzazione. Questioni di economia e finanza (occasional papers). *Banca d'Italia*, 86, 1–28.
- Anseu, W., Wily, L. A., Cotula, L., & Taylor, M. (2012). *Land rights and the rush for land: Findings of the global commercial pressures on land research project*. Rome: ILC.
- Archer, M. S. (1995). *Realist social theory. The morphogenetic approach*. Cambridge: Cambridge University Press.
- Archer, M. S. (Ed.). (2013). *Social morphogenesis*. New York: Springer.
- Atkinson, R., & Blandy, S. (Eds.). (2006). *Gated communities*. London: Routledge.
- Axinn, W. G., & Yabiku, S. T. (2001). Social change, the social organization of families, and fertility limitation. *American Journal of Sociology*, 106(5), 1219–1261.
- Baburoglu, O. N. (1988). The vortical environment: The fifth in the emery-trist levels of organizational environments. *Human Relations*, 41(3), 181–210.
- Bhaskar, R. (1998). *The possibility of naturalism*. London: Routledge.
- Bhaskar, R. (2008). *A realist theory of science*. London: Verso.
- Bunge, M. (2004). How does it work? The search for explanatory mechanisms. *Philosophy of the Social Sciences*, 34(1), 182–210.
- Busch, L. (2010). Standards, law, and governance. *Journal of Rural Social Science*, 25(3), 56–78.
- Censis. (2013). *Quarantasettesimo Rapporto sulla situazione sociale del Paese*. Milano: FrancoAngeli.
- Craver, C. F. (2007). *Explaining the brain. Mechanisms and the mosaic unity of neuroscience*. Oxford: Oxford University Press.
- Darden, L. (2006). *Reasoning in biological discoveries: Essays on mechanisms, interfield relations, and anomaly resolution*. Cambridge: Cambridge University Press.
- Demeulenaere, P. (Ed.). (2011). *Analytical sociology and social mechanisms*. Cambridge: Cambridge University Press.
- Ferguson, F. (2011). *Civilization. The west and the rest*. New York: Penguin Books.
- Friedman, T. L. (2006). *The world is flat. A brief history of the twenty-first century*. New York: Farrar, Straus and Giroux.

- Goodman, R., & Jinks, D. (2013a). *Socializing states: Promoting human rights through international law*. Oxford: Oxford University Press.
- Goodman, R., & Jinks, D. (2013b). Social mechanisms to promote international human rights: Complementary or contradictory? In T. Risse, S. C. Ropp, & K. Sikkink (Eds.), *The persistent power of human rights. From commitment to compliance* (pp. 103–121). Cambridge: Cambridge University Press.
- Gorski, P. (2009). Social “mechanisms” and comparative-historical sociology: A critical realist proposal. In P. Hedström & B. Wittrock (Eds.), *Frontiers of sociology* (pp. 147–196). Leiden: Brill.
- Gross, N. (2009). A pragmatist theory of social mechanisms. *American Sociological Review*, 74(3), 358–379.
- Guzzini, S. (Ed.). (2012). *The return of geopolitics in Europe? Social mechanisms and foreign policy identity crises*. Cambridge: Cambridge University Press.
- Hartwig, M. (Ed.). (2007). *Dictionary of critical realism*. London: Routledge.
- Hedström, P., & Swedberg, R. (Eds.). (1998). *Social mechanisms. An analytic approach to social theory*. Cambridge: Cambridge University Press.
- Hedström, P., & Ylikoski, P. (2010). Causal mechanisms in the social sciences. *Annual Review of Sociology*, 36, 49–67.
- Hsiang-Ke, C., Szu-Ting, C., & Millstein, R. L. (Eds.). (2013). *Mechanism and causality in biology and economics*. New York: Springer.
- Kolins Givan, R., Roberts, K. M., & Soule, S. A. (Eds.). (2010). *The diffusion of social movements: Actors, mechanisms, and political effects*. Cambridge: Cambridge University Press.
- Maccarini, A. (2013a). The morphogenetic approach and the idea of a morphogenetic society: The role of regularities. In M. S. Archer (Ed.), *Social morphogenesis* (pp. 39–60). New York: Springer.
- Maccarini, A. (2013b). A morphogenetic-relational account of social emergence: Processes and forms. In M. S. Archer & A. Maccarini (Eds.), *Engaging with the world. Agency, institutions, historical formations* (pp. 22–49). London: Routledge.
- Maccarini, A. M. (2014). The emergent social qualities of a ‘morphogenic’ society. Structures, cultures, and forms of reflexivity. In M. S. Archer (Ed.), *Late modernity. Trajectories towards morphogenic society* (pp. 49–76). New York: Springer.
- Machamer, P., Darden, L., & Craver, C. F. (2000). Thinking about mechanisms. *Philosophy of Science*, 67(1), 1–25.
- McCann, J. E., & Selsky, J. W. (1984). Hyperturbulence and the emergence of type 5 environments. *The Academy of Management Review*, 9(3), 460–470.
- McCann, J. E., & Selsky, J. W. (2012). *Mastering turbulence: The essential capabilities of agile and resilient individuals, teams and organizations*. San Francisco: Jossey Bass.
- McGloin, J. M., Sullivan, C. J., & Kennedy, L. W. (Eds.). (2011). *When crime appears. The role of emergence*. London: Routledge.
- Morgan, J. (2007). Emergence. In M. Hartwig (Ed.), *Dictionary of critical realism* (pp. 166–167). London: Routledge.
- Norkus, N. (2005). Mechanisms as miracle makers? The rise and Inconsistencies of the ‘mechanismic’ approach in social science and history. *History and Theory*, 44, 348–372.
- Pierson, P. (2004). *Politics in time: History, institutions, and social analysis*. Princeton: Princeton University Press.
- Prandini, R. (2013). Reflexive social subjectivities. In M. S. Archer & A. Maccarini (Eds.), *Engaging with the world. Agency, institutions, historical formations* (pp. 50–77). London: Routledge.
- Sabel, C. F. (2006). *Learning by monitoring*. Cambridge, MA: Harvard University Press.
- Sabel, C. F., & Zeitlin, J. (Eds.). (2010). *Experimentalist governance in the European Union. Towards a new architecture*. Oxford: Oxford University Press.
- Sewell, W. H. (1990). *Three temporalities: Toward a sociology of the event* (CSST Working Paper). Ann Arbor: University of Michigan.

- Steinmetz, G. (1998). Critical realism and historical sociology: A review article. *Comparative Studies in Society and History*, 40, 170–186.
- The World Bank. (2010). *Rising global interest in Farmland*. Washington, DC: The World Bank.
- Thévenot, L. (1997). Un Gouvernement Par Les Normes: Pratiques et politiques des formats d'information. In B. Conein & L. Thévenot (Eds.), *Cognition et information en société* (pp. 205–224). Paris: Éditions de l'École des Hautes Études en Sciences Sociales.
- Thorntorn, P., Ocasio, W., & Lounsbury, M. (2012). *The institutional logics perspective: A new approach to culture, structure and process*. Oxford: Oxford University Press.
- Tilly, C. (1997). Means and ends of comparison in macrosociology. *Comparative Social Research*, 16, 43–53.
- Tilly, C. (2001). Historical analysis of political processes. In J. H. Turner (Ed.), *Handbook of sociological theory* (pp. 567–588). New York: Kluwer.
- Tilly, C. (2004a). Observations of social processes and their formal representations. *Sociological Theory*, 22(4), 5.
- Tilly, C. (2004b). Social boundary mechanisms. *Philosophy of the Social Sciences*, 34(2), 211–236.
- Tilly, C. (2006). *Big structures, large processes, huge comparisons*. London: Sage.
- Tilly, C. (2008). *Explaining social processes*. Boulder: Paradigm Publishers.
- Willke, H. (2007). *Smart governance. Governing the global knowledge society*. Chicago: University of Chicago Press.
- Woodward, A., & Kohli, M. (Eds.). (2001). *Inclusions and exclusions in European societies*. London: Routledge.
- Ylikoski, P. (2011). Social mechanisms and explanatory relevance. In P. Demeulenaere (Ed.), *Analytical sociology and social mechanisms* (pp. 154–172). Cambridge: Cambridge University Press.

Part III
Mechanisms and Morphostasis:
Powers of Life or Death

Chapter 9

Why Don't Things Change? The Matter of Morphostasis

Douglas V. Porpora

In all our talk about morphogenesis, we need to address as well morphostasis and the mechanisms that account for it. Not everything is changing or changing as quickly as we think it might – or should. Why not? And then there is the well-known saying in French that we also hear often pronounced by English speakers: *Plus ça change, plus c'est la même chose* (the more things change, the more we find the same thing). If we think about that statement, it actually raises some deeper questions: If things are changing, how or in what way do we arrive at the same thing? And might we speak of change itself as a process that is either changing or not?

This chapter will address these questions as it explores mechanisms of social stasis. In fact, in this chapter, we will address some other questions as well for as we will see in our exploration, we encounter some pressure on our very notion of mechanisms. As I have explained elsewhere, in contrast with a tendency among critical realists, we cannot simply equate mechanisms with generative structures. Sometimes a mechanism is simply the causal power to which such structures give rise (Porpora 2013). I now see Philip Gorski (Chap. 2) in this volume arguing similarly.

Even, so extending our understanding of mechanisms does not exhaust the conceptual complexities associated with that understanding. In the first place, what do we do with a property like spatial distance? Is distance a mechanism? Tony Lawson and I continue to argue this point. I have been wrong to call him a nominalist, which I did anyway mostly to tease. It is quite clear from his paper in this volume (Chap. 10) that we agree on social positioning and relationality more than we disagree. Tony, nevertheless, remains more inclined than I to limit the reality of abstractions like distance. I will continue to argue here, however, that distance has causal effects, which by critical realism's casual criterion of existence suggests that distance is something real apart from our minds. So is distance a mechanism? We will need to return to the question.

D.V. Porpora (✉)

Department of Anthropology, Drexel University, Philadelphia, PA, USA

e-mail: porporad@drexel.edu

Similarly, we speak of conjunctures, of multiple mechanisms outside the laboratory operating simultaneously, either reinforcing or interfering with each other (Bhaskar 1998, 2008; Steinmetz 1998). But in chemical terms, to speak a little metaphorically, we can understand the multiple mechanisms comprising such conjunctures as either mixtures or compounds. That is to say sometimes the mechanisms comprising a conjuncture maintain their individuality and their individual effects, which either add to or subtract from each other. Other times, however, mechanisms meld together to form something new, something different from the mere sum of their individual effects. The result to which I am referring is something different from what in statistics we call interaction. It is perhaps another example of what we critical realists call emergence. Perhaps after working together for so long now, we are all beginning to think in convergent ways, because I am surprised to see similar ideas expressed in this volume by Andrea Maccarini's (Chap. 8) attention to conjunctural coalescence and by Archer's (1995, 2015) talk of *double morphogenesis*.

Already, it might be seen, the complexities and abstractions are beginning to get thicker. What I propose to do in this chapter is to approach them in a less thick, more concrete manner. I propose that we think through the multiple mechanisms of stasis at work in a select number of cases where we would expect change – or at least more change than observed. The cases will be of some political and human interest: The U.S. support of genocidal Central American regimes in the 1980s; the more current U.S. difficulty implementing national health care; the continuing problem of global warming; and the also continuing problems of worldwide injustice such as those associated with global inequality and food insecurity.

We will see that a number of the mechanisms recur and reconfigure. Those mechanisms are of the kinds that Archer has recently collected under the acronym SAC (Archer 2013). She introduced this acronym in our first book, and it is a very salutary contribution indeed. SAC stands for 'structure', 'agency', and 'culture', not seemingly a very earth-shattering triplet, but we must understand this triplet in current context. What Archer means to assert by the acronym SAC is the analytic distinctness of each element. In this assertion, she is reacting against the conflationary tendencies in contemporary sociology that would reduce one or more of the elements to what remains (see Archer 1982, 1988, 1995 for early expositions of conflation). Thus, for example, contemporary cultural sociology insists on reducing structure to culture (pace Sewell 1992), although once done, cultural practice theory in turn would then reduce culture to practice, which is a form of agency (Schatzki 2001; Swidler 1986, 2001). For practice theory, therefore, a kind of behaviorist agency is all we are left with. Mustafa Emirbayer's (1997) relational sociology, on the other hand, quite different from Pierpaolo Donati's (1983, 1991, 2012), denies particulars, reducing absolutely everything to relations. Against these reductive, conflationary tendencies, Maggie's SAC takes on considerable force: none of the three elements of the triplet can be reduced to the others. Each is analytically distinct. In any concrete case, all three are involved in ways that need to be explicated case by case. Structure essentially means ontologically objective social relations connecting social positions and social objects. Agency refers essentially to the

intentional action of conscious agents, in the cases we will examine, human beings. Culture, Archer (1988) – and I with her – aligns with Karl Popper's (1978) *World Three*, the collective products of human mentation: books, symphonies, airplanes, theories, ideologies, and so on. In contrast with current practice theory, culture is not thought of residing only in our actions. It resides also in our heads, but not only there. It resides as well in libraries and relics and anywhere that we find what Archer terms *intelligibilia* that need to be interpreted hermeneutically. I say that in any concrete case, elements of social structure, agency, and culture are all always involved. Nevertheless, how they are involved will vary from forms that comprise mixtures to forms that come closer to constituting compounds.

We are now ready to approach our cases. Because a number of the mechanisms at play recur in different cases, it would be repetitive to go through each case one by one. Instead, what I will do is begin with a section presenting all of the cases and then move on to describe the mechanisms that play a part in each, describing at the same time their different reconfigurations and combined effects.

9.1 The Cases

9.1.1 *The U.S. in Central America*

Of all the cases we will be examining, this one perhaps requires most explanation. Yet it is also closest to my heart. In fact, *The U.S. in Central America* is actually the subtitle of a book, *How Holocausts Happen*, which I wrote about this case (Porpora 1990). I did not just write about this case. I lived it as part of the Central American solidarity movement about which Christian Smith (1996) also wrote in *Resisting Reagan*. As I have told him on more than one occasion, his book recounts a significant part of my life. It was in *How Holocausts Happen* that I began detailing a number of the mechanisms we will consider here, although at the time I was not thinking of them in critical realist terms.

So what is this case about? The simple answer is a particularly egregious case of U.S. imperialism. In the late 1970s, revolutions were brewing in three Central American countries: El Salvador, Guatemala, and Nicaragua. In fact, in 1979, the *Sandinista National Liberation Front* had succeeded in toppling the dictator Anastasio Somoza and putting in his place a revolutionary government. Guatemala had been in turmoil since 1954, when at the behest of the United Fruit Company, the U.S. government toppled democratically elected president Jacobo Arbenz, his place being taken by a military junta. By 1979, a military junta was ruling El Salvador as well, but as in Guatemala, a grassroots revolutionary movement was gaining great strength.

The roots of rebellion were the same in all three countries. All three countries were agricultural monocultures, where 60 % of the land was owned by less than 2 % of the population. Malnutrition was rampant, especially among children. Democratic efforts to change the situation were met with state violence. Whereas the Catholic Church in these Catholic countries had once preached patience and attention to a

better afterlife, with Vatican II, a liberation theology emerged that urged peasants to seek social justice here and now. In all three countries, the response to state violence was the growth of guerrilla movements.

In 1979, the new *Sandinista* government in Nicaragua instituted land reform, a literacy campaign, and national health clinics. In Guatemala and El Salvador, the remaining right-wing governments responded to the guerrilla uprising with state terrorism. Between 1980 and 1986, approximately 100,000 civilians were murdered in each country. In El Salvador in particular, the slogan among the army and right-wing death squads was, “Be a patriot; kill a priest,” and, indeed, priests, nuns, and even an archbishop were all among the murdered. At the height of the conflict, each month found thousands more mutilated bodies lying in the streets (see Bonner 1984).

At the same time, the U.S., smarting from the Iraq hostage crisis, elected President Ronald Reagan who pledged to return America to her lost greatness. In the context of a continuing cold war with the Soviet Union, the Reagan administration portrayed the unrest in Central America as a Soviet incursion. Reagan sought to roll it back. Thus, between 1980 and 1986, the U.S. provided continuous military and financial aid to the governments of Guatemala and El Salvador and did all it could to topple the Sandinista regime in Nicaragua, including mobilizing terroristic counter-revolutionaries (the Contras) and mining Nicaragua’s harbors, for which it was taken to the International Criminal Court, where it was tried and found guilty in absentia. This U.S. policy went on for 6 years; in the interim, President Reagan won easy reelection.

In the face of ongoing systematic murder, why was U.S. policy allowed to go on for so long? It is a question of morphostasis.

9.1.2 The Problem of Global Warming

With global warming, we are dealing with stasis in change. That is to say, a case where continuous or semi-continuous change is taking place with potentially disastrous results without sufficient change in the constellation of forces promoting that change. There is in other words a stasis in the forces producing change.

Most likely virtually all readers of this book will accept that the earth’s climate is changing, that the earth is currently heating up. Most estimates suggest that, although it is not uniform everywhere, the global temperature has increased by almost 1 °C since the start of the twentieth century. The more sobering suggestion is that two thirds of that increase has occurred just since 1980 (National Research Council 2011; Wikipedia 2013a). And more sobering yet are the projections that this warming will continue at least throughout the twenty-first century, raising the earth’s average temperature between 4 and 6 °C (Wikipedia 2013a).

I expect that most readers of this book will also concur not only that global warming is occurring but that it is largely due to ongoing human activity. Putatively, the immediate cause is what is called the greenhouse effect, which we observe when we leave our car out in the sun. Light comes through the windows, hits the material

inside, and gets transformed into heat, which cannot, like the light, pass through the windows. The heat thus accumulates inside the car. Scientists almost universally agree that the same effect is taking place with the earth as a whole as the result of the accumulation in the atmosphere of so-called greenhouse gases, namely carbon dioxide and methane. These in turn, scientists say, are being added to the atmosphere largely from the burning of fossil fuels and deforestation (IPCC 2013).

Global warming is distressing because of its current and projected impacts. It is distressing to see the retreat of glaciers and ice disappearing from the poles. It is distressing to hear how polar bears are now endangered with the loss of their very habitat. For many of us, it is unnerving to see spring come ever earlier and to endure ever hotter summers; more distressing for many others is to experience more frequent “extreme weather” like hurricanes and tornados.

Most distressing are the projected impacts of global warming. First is the prospect of a rise in sea level. Sea levels have already been rising and are expected to rise even more through to the end of this century by anywhere between 20 and 60 cm. If those trends continue, cities like London, Bangkok, New York, and Mumbai will all be below sea level (Greenpeace International 2013). As many places experience both temporary and permanent flooding, not only will land be eroded and drinking water become salinized but many populations will actually be displaced, creating what are already being termed “environmental refugees.” The resulting havoc will be enormous. But sea level rise is not the only problem that will beset the oceans. With oceans absorbing more CO₂ from the atmosphere, they become more acidic, interfering with the life functioning of certain organisms like coral, mollusks and crustaceans.

Even apart from the oceans, the effects of global warming may be disastrous. Whole regions, once verdant, may become deserts or dust bowls. Extreme weather will become ever more common in more places. And some 20–30 % of plant and animal life will be threatened with extinction (Wikipedia 2013b).

If we find the results of global warming so distressing, and we ourselves are the cause of it, why don't we stop it? The question again is one of morphostasis.

9.1.3 *Health Care in the United States*

Until the Affordable Care Act that went into effect on October 2013, the U.S. was almost alone among developed countries in its failure to provide its citizens with universal health coverage (Fisher 2012). Called *Obamacare* by its still fervid opponents on America's political right, what the U.S. now has is still not the socialized medicine that characterizes most countries of the European Union. It is better, however, than what the U.S. had before.

Judged by comparative statistics, what America had before was not good. Although the U.S. remains the richest country in the world, it does not provide the richest offerings in terms of health care. In fact, for the 13 % of its population that is African American, health statistics approach low, third world standards.

Even more generally, America does not perform well comparatively. A report issued by the World Health Organization (WHO) ranked the U.S. health system overall 37th in the world, and it is getting worse. Ranked 18th among wealthy nations in 1990 in terms of life expectancy at birth, the U.S. is now in 27th place (Bezruchka 2012). Among the 193 countries reporting to WHO, the U.S. comes in 29th place. Among males, life expectancy in the U.S. ranks with such poor countries as Cuba, Colombia, and Poland.¹ In terms of infant mortality, the U.S. ranks as 40th.

Conversely, although it hardly achieves the best health statistics, the U.S. leads the world in health costs. Whereas the median per capita expenditure on health among OECD countries is \$3,000, the median expenditure in the U.S. is \$8,000. The question again is to explain the persistence of this startling discrepancy between health costs and health outcomes. Why does it not change? Again, we are talking of morphostasis.

9.1.4 Global Poverty

A similar question might be asked about global poverty. Why is it still with us?

In September 2000, world leaders, gathered at what was called the Millennium Summit, adopted the Millennium Project, aimed at reducing extreme poverty worldwide. According to the United Nations definition, extreme poverty is “a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to services” (Wikipedia 2013c). Eighty percent of the world’s population lives on less than \$10 a day. Almost half live on less than \$2.50 a day (Shah 2013). According to World Bank measures, these people are not all necessarily extremely poor. To qualify as extremely poor, they must fall below the \$1.25 a day standard (Shah 2013). That accounts for a little over one billion people, about one sixth of the world’s population.

By all measures, the world is basically a poor place. We do not notice it because we in the wealthy countries comprising 20 % of the world’s population account for 75 % of the world’s income. Yet the effects of extreme poverty are dire. According to the United Nations Food and Agriculture Organization (FAO), one in eight people alive in 2012, approximately 870 million people, were suffering chronic undernourishment (World Hunger Education Service 2013). Measured by stunting, the condition affects almost a third of children in developing countries. Each day, according to UNICEF, 22,000 of those children die (World Hunger Education Service 2013).

It would not be totally accurate to say the problem is without change, that conditions are not improving at all. In fact, worldwide, over the past 30 years, the number of people living in extreme poverty has fallen by half so that, today, only about 20 % of the world’s population still lives in extreme poverty (World Bank 2013).

¹Comparison to Other Nations. <http://www.americashealthrankings.org/Rankings/InternationalComparisons>

Of course, that still leaves over a billion people who do live so. There is therefore more to be done, and as Hillel famously asked, If not now, when?

9.2 The Mechanisms

In all these cases, the question posed is why stasis. Why did or do things stay the same or stay the same for so long or not change enough? It is not a question we often ask. But to fully understand change, we must also understand stability.

Addressing the question with regard to these cases is quite daunting. Where does one start? So many mechanisms appear involved at so many levels and involved in ways that cannot always be pried apart.

Perhaps one place to begin is with a denial of any attempt at exhaustiveness. My goal here will not be to explain any of these cases exhaustively but rather illustratively. That is, I will attempt just to illustrate the mechanisms operative in these cases that are productive of stasis.

In two ways at least, all the cases are alike. The problems identified are all macro – that is, large-scale, and they are all social, that is, collective in nature. From these two commonalities follows a third: following Archer’s SAC, all cases must be addressed in terms of culture, agency, and social structure. It may be helpful, therefore, to collect the mechanisms that I will discuss under those three headings.

Agency	Structure	Culture
Choice	Bystander effects	Values
Value commitments	Capitalist relations	Ideology
Ignorance	Inequality	Paradigm effect
Personal interests	Positional interests	Privatization of morality
	Power/disempowerment	Commodification of news
	Proximity	

The above listing of mechanisms is itself daunting. Where do we begin explicating them? One way would be to go in order of importance or impact. I will follow a different route, beginning where the non-sociological, popular mind would start: With the individual. Beginning there, I will try to work my way out, again, not necessarily in terms of impact but according to where our inquiry leads.

9.2.1 The Individual

Beginning with the individual, we immediately come across a conceptual issue. All the mechanisms listed under agency are of a piece. That is to say, they all are or enter into the personal decision or choice an individual makes. Apart from the choice itself, the other listings are as it were conditions governing or alternatives entering that choice.

One basic divide in human choice is between self-interest and morality. That is not to say that the two must always be in conflict or even that they usually are. It is just that the conflictive cases are the theoretically interesting ones and the ones that require us to distinguish between the two. Self-interest represents egoistic concerns, concerns about one's own individual well-being or at most the well-being of one's family. Morality concerns the impersonal right or good, that is, what is right or good irrespective of the costs or benefits to any particular ego reflecting on the morality of a situation. The right and the good are not synonymous. The good is an *aretaic* concern with values, what it is good for a human life to pursue. The right is a *deontic* concern with what is morally permissible or impermissible.

With regard to the cases under discussion, the conflict for the individual between morality and self-interest has been posed most starkly on utilitarian grounds by philosopher Peter Singer. In his famous (1972) article, "Famine, Affluence, and Morality," Singer puts the issue for us individuals in a nutshell:

As I write this, in November 1971, people are dying in East Bengal from lack of food, shelter, and medical care. The suffering and death that are occurring there now are not inevitable, not unavoidable in any fatalistic sense of the term. Constant poverty, a cyclone, and a civil war have turned at least nine million people into destitute refugees; nevertheless, it is not beyond the capacity of the richer nations to give enough assistance to reduce any further suffering to very small proportions. The decisions and actions of human beings can prevent this kind of suffering. Unfortunately, human beings have not made the necessary decisions. At the individual level, people have, with very few exceptions, not responded to the situation in any significant way. Generally speaking, people have not given large sums to relief funds; they have not written to their parliamentary representatives demanding increased government assistance; they have not demonstrated in the streets, held symbolic fasts, or done anything else directed toward providing the refugees with the means to satisfy their essential needs. (Singer 1972)

Why do we as individuals not give more or do more? We can say we cannot afford it in either time or money, but for many of us, that retort is hardly true. Surely, we are not all living at the edge, and just as surely we have some leisure time to give. How can we justify going out to dinner or a movie when that money and time could instead be devoted to those of the world's children who are starving or in desperate need of medical care (see Singer 1999)?

Singer poses the question in relation to world poverty and hunger, but it applies as well to others of the cases we are examining. How much time and money – how much do we sacrifice as individuals – for the sake of the environment? Certainly, we recycle and even bring our own reusable shopping bags to market. We drive a Prius or some other electric car to the airport. Yet in terms of our carbon footprint, all our year's effort is dwarfed by the single flight we took to attend a conference (Rosenthal 2013).

It is similar, in relation to Central America. While the Reagan administration continued to support genocidal governments in Central America, the American people re-elected him – and by a wide margin. Yes, many of us, myself included, strongly opposed those policies. I did not personally vote for Reagan. I was out in the street protesting against him. My wife would regularly complain of my absence. Yet, as Thoreau (1993) argued in his "Civil Disobedience," in an unjust society, the only place for a just person is jail. I was not in jail. Why not?

The philosophical question is how much money is enough to give? How much effort is enough to make? The sociological answer is that as individual agents, we each make a choice that balances our values against our own material self-interest. And to the extent that our individual choices are insufficient to change things, those choices – together with the self-interest and values – represent in composite one mechanism productive of stasis.

In speaking of a composite mechanism, we can already see how messy in the social sphere talk of mechanisms can become. We critical realists believe that as moral agents, humans have the causal power to determine freely their own behavior. That ontological – as opposed to political – free will is one mechanism at play here. But as alternatives we choose between, morality and self interest each causally exerts a hold on us; so do moral prioritizations (see Donati and Archer 2015). Thus, as Phil Gorski said to me during our Workshop, there may be good rational reasons to feel that our obligations to close others is greater: to our children, for example.

Thus, not only is our own free will a mechanism in play but so are all the choices among which we exercise it.

9.2.2 Culture

Next, we see that the matter of choice is even more complex in all sorts of other ways. For one thing, where do our values come from? In terms of SAC, values are an element of culture. In that domain, values do not occur in isolation but rather in complex ties with other values and beliefs (Archer 1988; Donati and Archer 2015; Porpora 2013). It follows that our own commitment to our values is in part a matter of how we find those values in the culture from which we draw. So we are rather quickly drawn from the individual to culture.

When we look at culture, we find many cross-cutting currents, among which are currents productive of stasis. When I look back at my own empirical work, I am somewhat startled to find a clear trajectory focused on one of those mechanisms of collective stasis, what I originally termed the social creation of moral indifference (Porpora 1990). Whereas in their book, *Passionate Politics*, Polletta and her co-authors (Polletta et al. 2001) examine the activation of emotions in social movements, what has preoccupied me in terms of moral indifference might be considered the non-activation of emotion that leads to the absence of social movements.

More recently, I have begun to speak of a *macro-moral disconnect* (Porpora et al. 2013). By a macro-moral disconnect, I mean a cultural tendency not to regard macro-moral issues in moral terms, to regard, that is, morally freighted, collective actions like war or torture or the provision of health care to all as matters not of a moral nature, to regard them instead simply as matters of politics or of purely self-or, at most, national self-interest. What I am describing has otherwise been called the privatization of morality (Condit 1999; Luckmann 1997), and it may coincide with a tendency toward what has been called the privatization of religion (Casanova 1994: 19). The privatization of morality and the privatization of religion, which are

analytically if not causally separate, refer to the withdrawal of morality and of religion from the public sphere so that they each operate only in the private sphere.

Both effects were simultaneously exemplified by the furor that developed in the U.S. during the 2008 presidential election over Barack Obama's pastor, the Reverend Jeremiah Wright. The Reverend Wright was a renowned practitioner of black liberation theology, which means he emphasized the social dimension of Christianity and particularly its prophetic voice that harkens back to Christianity's Jewish roots. Central to that prophetic voice is what is called "speaking truth to power," that is, condemning from the standpoint of religious ethics the abuse of political power. Hence Wright's use of the formula, "God damn America," and his comment that in the attacks of September 11, 2001, America's chickens "were coming home to roost."

Here is the thing about America. True, in contrast with Western Europe and Australia, the U.S. is a highly religious country with much higher rates of attendance at religious services. But outside of America's religious right and its much smaller religious left, represented by Reverend Wright, the American mainstream does not want religion – or morality either – in its politics. It does not want to be told that God is unhappy with America or that in any way what was done to America on September 11 could be linked to what America had been doing to others abroad. Thus, in the end, Obama's presidential bid required that he repudiate his tie to Reverend Wright. It was a requirement with which Obama complied.

The point here is that the privatization of religion and the privatization of morality are culturally deactivating mechanisms. If morality and religion are calls on persons to certain kinds of responses, then the absence of such calls helps to promote non-responsiveness and, consequently, stasis.

We began with a question of values and of how committed individuals are to the values they hold. But individuals can only commit to values if they first do hold them. What the privatization of morality and religion do is lower the reach and the height of the values we hold. At most, our ultimate concerns reach to the level of friends and family. Our sympathies may momentarily be stirred by sad stories of children elsewhere (see Rorty 1993), but without a way to connect those stories with our narrowed, lowered value commitments, their emotional pull fails to sustain.

The Ghost of Christmas Present rebukes Scrooge with the assertion that mankind was Scrooge's business. When we do not consider people everywhere our business, we are much less likely to attend to their affairs, even when it is we who are interfering with them. We do not read about them or at least register what we read. We become ignorant of what is happening. Thus it was, in the case of Central America. Reagan's "covert" war in Central America was so blatant that it became termed an "overt covert" war. Yet after 6 years of it, only a third of Americans could say whether it was the government of El Salvador the U.S. was backing and the government of Nicaragua the U.S. was trying to topple or the other way around (Porpora 1990). Evidently, Americans did not consider what was happening in Central America their business, and their resulting ignorance about it became yet another causal factor allowing what was happening to continue.

Ignorance is an important mechanism of morphostasis that fits into the entire complex of the decisions we make. Beyond the case of Central America, it functions

in relation to the environment. It functions in relation to world poverty. It functions in relation to health care as well. In all these cases, people do not know as much about these issues as they should.

9.2.3 *Structure*

When it comes to producing ignorance, more is involved than just individual irresponsibility and a cultural flattening of values. Social structural forces operate powerfully as well. Although there are other understandings, according to what I (Porpora 2013, 2015) call the canonical CR conception of it, social structure refers to ontologically objective, extra-discursive relations among social positions and social things.

This view of social structure is shared by Bourdieu in some formulations (e.g., Bourdieu 1996) but not in others (Bourdieu and Waquant 1992), and it needs constantly to be defended. Most recently, in a review of Archer's (2012) *The Reflexive Imperative*, which is on balance appreciative, François Dépelteau (2013) complains that Archer continually trots out social structure in application to every social situation, as if Dépelteau thinks even social structure in the abstract – as opposed to any specific social structural configuration – is something that ought to come and go. In opposition, Dépelteau (2008) defends what Emirbayer (1997) calls “relational sociology,” but which in Dépelteau's hands, means that structure refers to “more or less stable effects of transactions between interdependent actors” (Dépelteau 2008: 60). Actually, in opposition to relational sociology's reduction of absolutely everything to relations, Dépelteau leaves us with the kind of nominalist interactionism that relational sociology actually opposes.

In my own writing, I have long hurled the charge of nominalism against the opposition, regarding it actually as a provocatively fun term of abuse. To my surprise, John Levi Martin, prominent among the opposition (see, for example, Martin 2009, 2011, 2014), has recently commended me for insightfully identifying exactly where Martin at least thinks that the opposition to realism does philosophically stand. Although, even among us, there are those like Tony Lawson who are at least soft on nominalism, I will not go much into that debate in this paper but mainly adopt what I call the canonical CR view.

Interestingly, psychologists or at least social psychologists seem not to have a similar commitment to nominalism. The first structural condition of which I want to speak is well known among them. It is proximity. When it comes to how we are morally called by the suffering of others, proximity or distance is one of the primary structural factors that affect our decisions. “Out of sight, out of mind” is another familiar expression, one that expresses a causal connection: We are less likely to care about what we do not directly see. In his now notorious experiments, Milgram (2009) found that subjects were more apt to electrocute the experimental accomplice when they did not see the harm they were causing.

Singer, too, draws attention to the way distance affects our moral appraisals. Almost universally, he suggests, we would be considered morally remiss if we stood by idly while a child drowned before us. We would be morally obliged to act even if doing so cost us, time or money and our dinner out. Yet move the child a world away, and the situation changes. First, if the dying child is a world away, we may not even know about its condition. So in the first place, distance may contribute to our ignorance. Distance has an effect, however, even beyond ignorance. It may be as Phil Gorski says that our strongest moral obligations are to those to whom we are closest both physically and morally. It may be for that very reason that the psychological effect of distance is to contract our felt universe of obligation so that even when we do know about a distant child's need, the distance reduces that need's emotional call on us.

Distance is not the only structural factor of a social situation that deactivates our moral emotions. So does number. Stalin is reputed to have said that a single death is a tragedy while a million deaths is a statistic. Evidently, Mother Theresa felt the same way, saying that if she were to think of the poor en masse, she would not act (Payne 2010). Paul Slovic (2007) refers to the effect as the "collapse of compassion."

Although Singer sees the collapse of compassion operating in the case of world poverty, it clearly operates as well in the other cases we are considering. I wrote of it years ago in my work on Central America (Porpora 1990). Back in the 1980s when a thousand civilians a month were ending up dead on Salvadoran streets, murdered by the government our Reagan administration was supporting, a small child, termed by the media "Baby Jessica," fell down a well. In contrast with its apparent moral indifference to the dead in El Salvador, the American public was transfixed by Baby Jessica and the effort to rescue her. Baby Jessica's predicament was a tragedy. The thousands dead in El Salvador were a statistic.

Beyond proximity and number, the social psychologists alert us to still other structural factors at work. Prominent among these are the so-called bystander effects, first introduced into academic circles by Latané and Darley (1970). Concern with bystander effects originated with the murder of Kitty Genovese and the putative non-response to it of 38 of her neighbors. Although the pattern of non-response in this case is actually not as clear as first reported, the effects associated with it are real enough.

The two bystander effects of interest are pluralistic ignorance and the diffusion of responsibility. Pluralistic ignorance refers to cognitive assessment and the diffusion of responsibility to the decision to act. The principle of pluralistic ignorance is that when it comes to emergencies or any unusual phenomenon, two or more heads are worse than one. When one person alone witnesses an emergency, he or she is likely to interpret it as such. When multiple people witness the emergency, each waits for the reaction of others. If everyone does so simultaneously, no one acts. Instead, each interprets the inaction of the others as signifying that what is happening is not really something calling for active response. The resulting pluralistic ignorance is the first of the two structural bystander effects leading to bystander non-responsiveness.

Although the social psychologists were thinking primarily of more micro-situations like the Kitty Genevese case, pluralistic ignorance can certainly be applied to national level situations as well. If the general public as a whole is not reacting to a situation as an emergency calling for urgent response, each member of that public is correspondingly less likely to do so. And if each member of the public is less likely to do so, then so is the public as a whole.

We can see pluralistic ignorance operating in a number of the cases under consideration. If no one appears especially exercised about extreme inequality, then maybe it is not a problem. Similarly with what our government may be doing in another country. And although global warming may be a problem, the public's apparent lack of urgency about it may indicate that the problem may after all not be quite as urgent as the environmentalists make out.

Pluralistic ignorance is one effect, the diffusion of responsibility another. As the phrase suggests, the diffusion of responsibility refers to how the sense of responsibility is diffused among multiple bystanders to an emergency and how with that diffusion the responsibility each feels is lessened. The effects operate in a way similar to pluralistic ignorance. When one bystander alone witnesses an emergency, he or she bears all the responsibility for action and, consequently, is more likely to exercise it.

When, in contrast, multiple bystanders witness an emergency, responsibility is as if it were diffused. Each bystander assumes that someone else will do what needs to be done. In the event that they all operate on the same assumption, no one will intervene. Again, the effect will be if anything more pronounced at a national level, where (i) there are millions of others who can be expected to do what needs doing; and (ii) it is rarely any individual citizen's direct responsibility to act but the responsibility rather of the political class. From our discussion of my paper, we might even add a third factor here. In particular, Emmanuel Lazega points out that in such situations, people just feel that when states go awry, it is the responsibility not of ordinary citizens but of politicians or government officials to put things right.

Compounding these effects is yet another structural factor: political disempowerment. In the U.S., for example, where only half the people vote and only a third follow closely any national story (Robinson 2007), people feel disempowered by the political process, that is, unable to make much difference. I wrote about this too in reference to Central America (Porpora 1990) but it applies to all the cases we are discussing. To the extent that people feel disempowered, they are less likely to act politically. It is a macro version of what psychologist Martin Seligman (1975) first identified as "learned helplessness."

The feeling of disempowerment may be psychological, but the actual disempowerment itself is real and structural and derives from factors ranging, in America, from the two-party system to the role of money in the political equation, which has only intensified since my commentary on Central America. Simply put, to the extent that money determines candidates and their positions, and to the extent that the choice of candidates and their positions is more important than choosing among them once they have been picked, then an equal say in the political process cannot be equated with an equal vote. What comes before the vote is more important, and it is far

from equal. The American people are right to feel disempowered. Their disempowerment is structural and real.

It gets worse because there is a feedback effect. The political class looks to the public for its mandate. If the political class does not find the public clamoring for addressing, say, global warming, then the political class will direct itself instead to that for which the public does clamor, which may be matters comparatively superficial. Thus, the premise behind Thomas Frank's (2005) *What's the Matter With Kansas?* Frank's question can be extended to the whole, which, figuratively, fiddles while the collective Rome burns.

At the national or international levels, the bystander effects are compounded by effects of a more cultural nature. In some cases an authoritarianism operates, which disposes people to trust their own government and to distrust what is being said by foreign governments. At the moment, as Colin Wight notes in his paper here (Chap. 3), there is growing distrust of all government, particularly in America, but a strong element of ethnocentrism remains.

More basic is what I am calling a Kuhnian paradigm effect. In *Landscapes of the Soul* (2001), I argued that we humans inhabit a space of rival values. In addition, we inhabit a critical space of rival positions and arguments about our values and other things that matter. It is important for responsible citizenship that we orient ourselves within this critical space and that we remain aware of and seriously consider the arguments residing there.

What I am here calling the Kuhnian paradigm effect is how we change our minds within that critical space of argument. Simply put, we do it the same way that scientists do, through paradigm change. What that means, as we know since Kuhn (2012) is that it happens slowly. There are, as Lakatos (1970) pointed out, rarely any decisive experiments that cannot be answered at all by the other side.

Thus, as long as a paradigm represents either vested interests or emotional investment, it will be maintained – and, actually, maintained rationally – for a long time, even when wounded by counter-evidence. We see this most clearly today in the debate about global warming. Yes, it is true that 90 % of scientists believe it is happening and happening because of our own action, but have not our own sociologists of science counseled us not to grant automatic privilege to science? On what grounds then do we complain when the right-wing uses our own rhetoric against us?

Of course, we critical realists never bought into the postmodernist denial of judgmental rationality. Still, what I call the Kuhnian effect remains. As Aristotle recognized, beyond the domain of pure logic or mathematics, we are outside the range of formal proof. We must instead content ourselves with rhetoric, which does not necessarily mean the proto-postmodernism of the Greek sophists, but it does mean that positions entrenched in emotion and self-interest can only be changed slowly and that along with logic there is sometimes emotional exorcism that is also needed.

9.2.4 *Beyond the Individual*

Up until now, although I have considered both structure and culture, my focus has been on the individual, on what has effected individual choice. In the main, however, although I have not left much time for it, the mechanisms in play keeping things the same are beyond individual action. I do not mean to say that individuals disappear from the account. They never do, but the mechanisms themselves reside at a higher level.

I have room now only for a sketch. Certainly, things stay the same in large part because of power dynamics, because those with the power to do so keep things the way they are. In our age, corporations and those associated with their leadership wield tremendous power. We have already talked of how in the U.S., tremendous inequality undermines democracy. Indeed, the money of the Koch brothers currently funds, among other things, the forces that resist both universal health care and the recognition of the human contribution to global warming.

But, although sociologists, enamored of Bourdieu and Foucault, love to utter the word power, power by itself is inert. Yes, the corporations and the Koch brothers have the power to keep things the same, but why do they use it? What motivates them? Once we ask that question, it becomes clear we need to speak of interests as well as power, and positional interests take us back to social structure and, more concretely, to capitalism.

What motivates corporations to externalize costs to the environment and to resist efforts, like so-called cap and trade, to correct that tendency? It is not greed, if greed is understood as a motive unconnected to structural position and structural necessity. On the contrary, the fact is that capitalist relations pit capitalist firms against each other in an ever intensifying competition, no firm can afford to be at a competitive disadvantage. As I said to Tony Lawson in response to his paper, such competition is itself a governing relation that makes corporations act as they do. In the face of such competition, each, like Gulliver, resists Lilliputian efforts to tie it down. They use their power accordingly.

Although capitalism may not have originated it, capitalism greatly intensifies the economic inequality that is the source of such power. That inequality has other perverse effects. Combined with market forces, inequality is largely responsible for the continuation of world poverty. Although current neo-liberal ideology assumes that given free rein, markets will eventually serve all human needs, Adam Smith saw the truth. He saw that not only producers but consumers too are in competition with one another, in competition to attract the producers' energies. Consumers of food are in competition with consumers of coffee, tobacco and cut flowers for the production of farm land. Such competition among what Smith called absolute demand is settled by what he called effectual demand: buying power.

Under conditions of relative equality, markets will perform effectively, serving everyone's needs before anyone's desire for luxuries. Under conditions of tremendous inequality, however, markets will run amok, producing more and more for those who already have much and little for those without the buying power to command

producers' resources. That is where we are today with a fused mechanism of inequality and market forces. This fused mechanism has little to do directly with either gender or identity, and so it tends to be neglected by contemporary sociology. It nevertheless is devastating in effect.

9.3 Conclusion

This paper has been organized around a kind of paradox: That fully to understand morphogenesis, we need also to look closely at morphostasis. Not just because morphostasis is as it were the left hand of morphogenesis but more fundamentally because when there is continued morphogenesis, that continuation is in itself a condition of morphostasis. If morphogenesis is produced by a conjuncture of mechanisms, then morphogenesis continues only so long as such a conjuncture stays in place. And staying in place is what we mean by morphostasis.

This paper has accordingly tried to unpack and illustrate various mechanisms of morphostasis. For the most part, although it examined structure and culture as well, the paper organized those mechanisms around the choices of individual actors. In that connection, we saw how when speaking of multiple causal mechanisms operating simultaneously or conjunctures, we may observe a distinction similar to that made in chemistry between mixtures and compounds.

As I say, it seems something more than coincidence that in their papers, Maccarini and Archer write of the same thing. As Archer (Chap. 7) says at one point, "any generative mechanism that is transforming the social order also ineluctably sustains or transforms the prior groupings of Primary and Corporate agents." In other words, while for we Critical Realists, structure, culture, and agency are all analytically distinct, it is nevertheless possible to observe a kind of empirical fusion, in which the structure, both directly, and perhaps via the culture, molds the actors into certain kinds of agents who come to resonate better with the structure.

More globally, for example, we may think of the fit between the competitive relations of capitalism and the kind of agents who are culturally groomed to take their positions within that structure, agents who, for example, think in individualistic terms and individualistic entitlements, individuals who find it extremely hard to think relationally, even when they become sociologists. Along similar lines, what Marxists used to call a social formation was an entire social fusion of economy, culture, and society into a single overarching mechanism of subsistence with a common resonance, each element becoming somewhat transformed in the process.

Certainly and finally, my chapter has shown, as Archer argues (Chap. 7) against both Dave Elder-Vass and Keith Sawyer, that there is no question of either morphogenesis or morphostasis as pure states, either occurring completely in the absence of the other. In any concrete reality, elements of both will co-occur, and at an abstract level necessarily so.

I end with a final question put to me in different forms by Ismael Al-Amoudi and John Latsis. Both are challenged by my (2013) report that in the case of both the attack on Iraq and the subsequent revelations of torture associated with Abu Ghraib, only the religious press – of both the left and right – discussed matters in moral terms. The secular press did not. Was it, John asked, just a contingent case that secular atheists did not supply a compelling moral discourse? Are they incapable of doing so? Ismael's question was similar: Is this a logical consequence of liberalism or a misinterpretation of liberalism?

I certainly do not think that atheists or secular liberals are incapable of offering moral arguments about macro-moral matters. In the cases I examined, many of the moral arguments canvassed even by the religious were not specifically religious in nature. They could have been made by secular liberals.

Is the phenomenon I observed a consequence of liberalism or a misinterpretation of it? That is a longer question, one that Ismael Al-Amoudi and I discussed at length on a walk after the Workshop. We agreed that between *Political Liberalism* (Rawls 2005) and *Justice as Fairness* (Rawls 2001), Rawls is not entirely clear. The answer will depend on what we consider liberalism to be, but I would at least concede that what I observed does not follow logically from liberalism. At most, it is a correctible causal effect of a basically liberal sensibility.

References

- Archer, M. (1982). Morphogenesis versus structuration: On combining structure and action. *British Journal of Sociology*, 33(4), 455–483.
- Archer, M. (1988). *Culture and agency: The place of culture in social theory*. Cambridge: Cambridge University Press.
- Archer, M. (1995). *Realist social theory: The morphogenetic approach*. Cambridge: Cambridge University Press.
- Archer, M. (2012). *The reflexive imperative in late modernity*. Cambridge: Cambridge University Press.
- Archer, M. (2013). Social morphogenesis and the prospects of morphogenetic society. In M. Archer (Ed.), *Social morphogenesis* (pp. 1–24). Dordrecht: Springer.
- Archer, M. (2015). How Agency is Transformed in the Course of Social Transformation: Don't forget the double morphogenesis. In M. Archer (Ed.), *Generative mechanisms transforming late modernity*. New York: Springer.
- Bezruchka, S. (2012). The hurrier I go the behinder I get: The deteriorating international ranking of U.S. Health status. *Annual Review of Public Health*, 33, 157–173. <http://www.annualreviews.org/doi/full/10.1146/annurev-publhealth-031811-124649>. Accessed 18 Nov 2013.
- Bhaskar, R. (1998). *The possibility of naturalism: A philosophical critique of the contemporary human sciences*. New York: Routledge.
- Bhaskar, R. (2008). *A realist theory of science*. New York: Routledge.
- Bonner, R. (1984). *Weakness and deceit: U.S. policy and El Salvador*. New York: Crown.
- Bourdieu, P. (1996). *The rules of art*. Stanford: Stanford University Press.
- Bourdieu, P., & Wacquant, L. (1992). *An invitation to a reflexive sociology*. Chicago: University of Chicago Press.
- Casanova, J. (1994). *Public religions in the modern world*. Chicago: University of Chicago Press.

- Condit, C. M. (1999). Crafting virtue: The rhetorical construction of public morality. In J. L. Lucaites, C. M. Condit, & S. Caudill (Eds.), *Contemporary rhetorical theory: A reader* (pp. 306–326). New York: Guilford.
- Dépelteau, F. (2008). Relational thinking: A critique of co-deterministic theories of structure and agency. *Sociological Theory*, 26(1), 51–73.
- Dépelteau, F. (2013). Structure and agency again. And much more. *Contemporary Sociology*, 42(6), 815–817.
- Donati, P. (1983). *Introduzione alla sociologia relazionale*. Milan: Franco Angeli.
- Donati, P. (1991). *Teoria relazionale della società*. Milan: Franco Angeli.
- Donati, P. (2012). *Relational sociology: A new paradigm for the social sciences*. New York: Cambridge University Press.
- Donati, P & Archer, M. (2015). *The relational subject*. Cambridge: Cambridge University Press.
- Emirbayer, M. (1997). Manifesto for a relational sociology. *American Journal of Sociology*, 103(2), 281–317.
- Fisher, M. (2012). Here's a map of countries that provide universal health care: America's still not on it. In *The Atlantic*. <http://www.theatlantic.com/international/archive/2012/06/heres-a-map-of-the-countries-that-provide-universal-health-care-americas-still-not-on-it/259153/>. Accessed 18 Nov 2013.
- Frank, T. (2005). *What's the matter with Kansas? How conservatives won the heart of America*. New York: Holt.
- Greenpeace International (2013). Sea level rise. http://www.greenpeace.org/international/en/campaigns/climate-change/impacts/sea_level_rise/
- IPCC (Intergovernmental Panel on Climate Change). (2013). *Climate change 2013: The physical science basis*. <http://www.ipcc.ch/report/ar5/wg1/#.Uop4shb0o20>. Accessed 18 Nov 2013.
- Kuhn, T. (2012). *The structure of scientific revolutions*. Chicago: University of Chicago Press.
- Lakatos, I. (1970). Falsification and the methodology of scientific research programmes. In I. Lakatos & A. Musgrave (Eds.), *Criticism and the growth of knowledge* (pp. 91–196). New York: Cambridge University Press.
- Latane, J., & Darley, B. (1970). *The unresponsive bystander: Why doesn't he help?* New York: Prentice Hall.
- Luckmann, T. (1997). *The moral order of modern societies: Moral communication and indirect moralizing*. Budapest: Collegium Budapest, Institute for Advanced Study.
- Martin, J. L. (2009). *Social structures*. Princeton: Princeton University Press.
- Martin, J. L. (2011). *The explanation of social action*. New York: Oxford University Press.
- Martin, J. L. (2014). *Thinking through theory*. New York: Norton.
- Milgram, S. (2009). *Obedience to authority*. New York: Harper.
- National Research Council. (2011). *America's climate choices*. Washington, DC: National Academies Press.
- Payne, K. (2010). Why is the death of a million a statistic? In *Psychology today*. <http://www.psychologytoday.com/blog/life-autopilot/201003/why-is-the-death-one-million-statistic>. Accessed 9 Nov 2013.
- Polletta, F., Jasper, J. M., & Goodwin, J. (2001). *Passionate politics: Emotions and social movements*. Chicago: University of Chicago.
- Popper, K. (1978). Three worlds. The Tanner lecture on human values. Delivered at University of Michigan, p. 144. http://tannerlectures.utah.edu/_documents/a-to-z/pp/popper80.pdf. Accessed online 21 Dec 2014.
- Porpora, D. V. (1990). *How holocausts happen: The U.S. in Central America*. Philadelphia: Temple University Press.
- Porpora, D. V. (2001). *Landscapes of the soul: The loss of moral meaning in American life*. New York: Oxford.
- Porpora, D. V. (2013). *Critical realism and sociology*. Unpublished manuscript.
- Porpora, D. V., Nikolaev, A., Hagemann, J., & Jenkins. (2013). *Post-ethical society: The Iraq war, Abu Ghraib, and the moral failure of the secular*. Chicago: University of Chicago Press.
- Porpora. (2015). *Reconstructing sociology: The critical realist approach*. Cambridge: Cambridge University Press.

- Rawls, J. (2001). *Justice as fairness: A restatement*. Cambridge: Belknap.
- Rawls, J. (2005). *Political liberalism*. New York: Columbia University.
- Robinson, M. J. (2007). Two decades of American news preferences: Pt. I, analyzing what news the public follows – and doesn't follow. <http://pewresearch.org/assets/pdf/NewsInterest1986-2007.pdf>. 15 Aug 2007.
- Rorty, R. (1993). Human rights, rationality, and sentimentality. In R. Rorty (Ed.), *Truth and progress: Philosophical papers* (Vol. 3, pp. 167–185). Cambridge: Cambridge University Press.
- Rosenthal, E. (2013, January 26). Your biggest carbon sin may well be air travel. *New York Times Sunday Review*. http://www.nytimes.com/2013/01/27/sunday-review/the-biggest-carbon-sin-air-travel.html?_r=0. Accessed 19 Nov 2013.
- Schatzki, T., Knorr Cetina, K., & von Savigny, E. (Eds.). (2001). *The practice turn in contemporary theory*. New York: Routledge.
- Seligman, M. E. P. (1975). *Helplessness: On depression, development, and death*. San Francisco: W. H. Freeman.
- Sewell, W. H. (1992). A theory of structure: Duality, agency, and transformation. *American Journal of Sociology*, 98(1), 1–29, p. 2.
- Shah, A. (2013). Poverty facts and figures. *Global Issues*. <http://www.globalissues.org/article/26/poverty-facts-and-stats>. Accessed 19 Nov 2013.
- Singer, P. (1972). Famine, affluence, and morality. *Philosophy and Public Affairs*, 1(Spring 1), 229–243. <http://www.utilitarianism.net/singer/by/1972----.htm>
- Singer, P. (1999). The Singer solution to world poverty. *New York Times Magazine*. <http://www.nytimes.com/1999/09/05/magazine/the-singer-solution-to-world-poverty.html?pagewanted=all&src=pm>. Accessed 19 Nov 2013.
- Slovic, P. (2007). If I look at the mass, I will never act: Psychic numbing and genocide. *Decision and Judgment Making*, 2(2), 79–95.
- Smith, C. (1996). *Resisting Reagan: The U.S. Central America solidarity movement*. Chicago: Chicago University Press.
- Steinmetz, G. (1998). Critical realism and historical sociology: A review article. *Comparative Studies in Society and History*, 40, 170–186.
- Swidler, A. (1986). Culture in action: Symbols and strategies. *American Sociological Review*, 51(2), 273–286.
- Swidler, A. (2001). What anchors cultural practices. In T. R. Schatzki, K. Knorr Cetina, & E. von Savigny (Eds.), *The practice turn in contemporary theory* (pp. 74–92). New York: Routledge.
- Thoreau, H. D. (1993). Civil disobedience. In H. D. Thoreau (Ed.), *Walden* (pp. 277–303). New York: Barnes & Noble Classics.
- Wikipedia. (2013a). Global warming. http://en.wikipedia.org/wiki/Global_warming. Accessed 18 Nov 2013.
- Wikipedia. (2013b). Extinction risk from global warming. http://en.wikipedia.org/wiki/Extinction_risk_from_global_warming. Accessed 18 Nov 2013.
- Wikipedia. (2013c). Extreme poverty. http://en.wikipedia.org/wiki/Extreme_poverty#cite_ref-1
- World Bank. (2013). Remarkable declines in global poverty, but major challenges remain. <http://www.worldbank.org/en/news/pressrelease/2013/04/17/remarkable-declines-in-global-poverty-but-major-challenges-remain>. Accessed 19 Nov 2013.
- World Hunger Education Service (2013). *2013 World hunger and poverty facts and statistics*. <http://www.worldhunger.org/articles/Learn/world%20hunger%20facts%2002.htm>. Accessed 19 Nov 2013.

Chapter 10

The Modern Corporation: The Site of a Mechanism (of Global Social Change) that Is Out-of-Control?

Tony Lawson

The ways of acting of modern corporations, not least those that are multinational, constitute significant mechanisms of social change. I doubt that this assessment is overly contentious. Indeed, there is seemingly widespread agreement that the mechanisms in play are dynamic, pervasive and consequential.¹

There is less agreement, however, as to the extent to which these mechanisms, or their effects, are especially desirable. Indeed, informed commentators regularly criticise the fact that multinational corporations almost everywhere operate beyond the control of various local regulators, not least tax authorities.² Some go further,

¹I myself discuss these sorts of issues in Lawson (2014a).

²The UK TV public was recently (12/11/2012) treated to the spectacle of executives from Starbucks, Amazon and Google appearing before the UK Parliament's Public Accounts Committee to explain why, despite their extensive operations in the UK, they appeared to make relatively little profit. The event was described by the *BBC News Business* as follows:

“Three executives from large multinational corporations were ritually flagellated by Parliament's Public Accounts Committee as penance for the alleged tax sins of their employers. Starbucks' head of finance, Troy Alstead, was forced to portray his company as a perennial commercial flop, in order to account for its peculiar failure to record a taxable profit in the UK for 14 out of the last 15 years. He was followed by Amazon's Andrew Cecil, who was reduced to stuttering when he was accused of being “pathetic” for his inability to disclose something as basic as how much of his firm's European sales came from the UK last year. Last up was Google's Matt Brittin. In contrast to his two peers, Mr Brittin did not seek to evade or apologise. Yes, of course Google minimises its tax bill, by operating in Bermuda and Ireland, he said. Google had a duty to its shareholders to minimise its costs. And besides, the UK still benefited from Google's many free products, not least its search engine, which were engineered by thousands of employees in California” Available on line at: <http://www.bbc.co.uk/news/business-20580545> on November 07 2013.

In fact a 4-month investigation by news agency Reuters revealed that Starbucks reportedly paid just £8.6 m in corporation tax in the UK over 14 years – including reporting accounting losses

T. Lawson (✉)

Faculty of Economics, University of Cambridge, Cambridge, UK

Tony.Lawson@econ.cam.ac.uk

suggesting that corporations act in ways that are undermining of any semblance of democracy.³ A sizable few even express concern that modern corporations are not only frequently ‘beyond control’ (of local regulators and so forth) but also, on occasion at least, seemingly ‘out of control’.⁴

How, though, could such a scenario arise? How is it structurally feasible that the modern corporation could be frequently beyond the control of relevant authorities let alone out of control, or at least appearing to be so to various close observers? Presumably this appearance might be gathered from instances where mechanisms that a corporation grounds, or their effects, are of a sort that no one particularly wants or feels able to defend or prevent. But how could such interventions be grounded?

The foregoing are the sorts of questions I pursue here. That is, whilst most concerned commentators occupy themselves with examining ways of reining in corporations, with accommodating or relationally steering their mechanisms and thus effects, I want to explore the structural conditions of their possibility.

I take it that any (generative) mechanism, at its most basic, is a property of some structured entity. A mechanism is a way of acting of that entity that is made possible by its organising (relational) structure; and it is triggered under various conditions. Put differently, it is a causal power of a structured entity in play⁵ (for an elaboration of this conception, see e.g., Lawson 1997).

when it was profitable. Google’s UK unit paid just £6 m to the Treasury in 2011 on turnover of £395 m, according to the *Telegraph*. The UK’s biggest online retailer Amazon generated sales of more than £3.3bn in the country in 2012 but paid no corporation tax on any of the profits, according to the *Guardian*. Facebook in the UK paid £238,000 in tax last year 2012), according to its accounts, with most of the company’s income believed to be legally going through its European base in Dublin, where corporation tax is lower than the UK Apple paid less than 2 % corporation tax on its profits outside the US, paying \$713 m (£445 m) on foreign pre-tax profits of \$36.8bn. US auction site eBay paid only £1.2 m in tax in the UK, according to an investigation by the *Sunday Times*.

³See for example Joel Bakan (2004), David C. Corton (1995) or Lee Drutman and Charlie Cray (2004).

⁴This is an overall assessment widely recorded and usefully summarised by Lee Drutman and Charlie Cray on the cover of their 2004 book *People’s Business: Controlling Corporations and Restoring Democracy* where they record “the widespread conviction that corporations are increasingly out of control, with potentially dangerous consequences for the communities where they operate, their own employees, and even for their owners, the shareholders”. See also Joel Bakan’s (2004) *The Corporation: The Pathological Pursuit of Profit and Power*, or David C. Corton’s (1995) *When Corporations Rule the World*. As a representative of the (literally) millions of bloggers that have formed a similar assessment, Ralph Nader (2002) warns that “Big corporations are out of control, in large part, not only from the law, consumers, workers, communities, but from their own owners” (found in November 2013 at <http://www.nader.org/interest/032802.html>).

⁵Clearly on this conception a given causal mechanism can be associated with different outcomes each time it is triggered. It is thus not event, outcome or explanation oriented, even though explanations of outcomes or events will be associated with (typically numerous) causal mechanisms; rather the concept of a mechanism refers back to the emergent structured entity of which (when triggered) it is a property. As such a mechanism is associated *not with regularities* at the level of actual outcomes but *with effects or tendencies*, which will, or can, participate along with numerous

My objective here, then, can be formulated as an enquiry concerned with identifying those aspects of the structuring of the corporation (in particular the multinational corporation) and its (triggering) conditions of operation that give rise to mechanisms of the sort under discussion. How are mechanisms that are widely found to be beyond the control (of interested parties) and sometimes suspected of being out of control, structurally grounded?

At the heart of the answer, we will see, if somewhat unexpectedly (to this contributor at least), is a simple if somewhat bizarre case of a highly contingent, certainly in no clear way natural, form of social positioning. Though easily summarised this answer requires a good deal of (social-ontological) elaboration.

10.1 The Corporate Mechanism

It is hardly news, of course, that corporate businesses wield great financial power and use the latter to gain political power, not least through manipulating politicians to lobby on their behalf, controlling forms of media, and so forth. They also engage large expensive legal teams both to oppose national and international proposals including treaties and such like considered detrimental to their perceived interests and/or, in the few cases in which governments or other bodies do successfully take a stand that curbs aspects of the activities of these companies, to achieve substantial compensations for claimed losses of profits etcetera.⁶

other possibly countervailing tendencies in determining actual outcomes. Although (to use a mechanical [non-social] example) the gravitational mechanism may affect the path of the autumn leaf, the latter may still fly over roof tops as a result of the combined effects on its path of numerous often countervailing operative mechanisms.

⁶There is a provision in the *Investor-state dispute settlement (ISDS)*, in international trade treaties and international investment agreements that grants ‘investors’ the right to initiate dispute settlement proceedings against a foreign government in their own right under international law.

Examples abound of this provision being wielded by corporations either to prevent change (through a threat of suing) or to gain huge compensation after the event. As I write, the tobacco company Philip Morris is using a trade agreement Australia struck with Hong Kong, to seek a vast sum in compensation for the loss of what it calls its intellectual property. This follows in the wake of the decision by the Australian government, validated by the Australian Supreme Court, to legislate that cigarettes should be sold only in plain packets, marked with health warnings designed to shock.

When Argentina recently imposed a freeze on soaring household energy and water bills the relevant international utility companies used, whose vast bills had prompted the government to act sued and forced the government to pay out over a billion dollars in compensation. Currently a Canadian company is suing El Salvador for \$315 m. This is for the loss of its anticipated future profits, after local communities managed to persuade the government to refuse permission for a vast gold mine which threatened to contaminate their water supplies. Meanwhile, Canadian courts revoked two patents owned by the American drugs firm Eli Lilly. This was because the company had not sufficient evidence that they worked. In consequence, Eli Lilly is now suing the Canadian government for \$500 m, and demanding that Canada’s patent laws are changed.

This is all fairly straightforward. A more interesting issue is the source of this power that enables corporations to operate in this manner, including how they achieve success including often legally avoiding paying reasonable taxes on profits in locations where their activities are significant.

At a fairly superficial level, of course, the mechanisms of tax evasion and such like are also already well understood. Fundamental here is the practice of transfer pricing. The capitalist world is comprised of numerous countries and legal jurisdictions, each with its own specific set of tax rules. Companies thus take these different rules into account in making decisions about how to organise their various activities. Fundamentally, they decide where to locate their subsidiaries by examining how the different locations affect their overall tax bills and such like. In fact, the 20-year period prior to the 2008 financial crisis was one of unprecedented international spread and consolidation of global businesses.⁷

Once location decisions are made then transfer pricing kicks in. Transfer prices are those that one part or a subsidiary of a company pays to other parts located elsewhere. Thus, by locating a subsidiary in a low tax country, any head office or indeed any additional subsidiary located in a relatively high tax location, such as (currently) the UK say, can transfer most or even all its nominal profits to the subsidiary in the low tax country. This it does by buying parts from the less-taxed subsidiary, at hugely inflated prices, or by paying significant royalty fees for usage of intellectual property rights and brands owned by the company, by taking out loans from it and servicing (typically high rates of) interest charged on them, etc. Transfer pricing thus involves payments from the UK business to non-UK companies within the same corporate empire.

Even though this process is well understood, there is not much that the relevant tax authorities appear able to do about it. There is a presumption that purchases should be at 'fair' market prices. But whatever the latter may mean, the transactions involved would never take place in an open market, so who is to say what any 'fair market price' might be? Companies invent stories to justify the prices they use, and leave it to under-resourced and ill-equipped tax authorities to think of ways of challenging them; the challenges rarely materialise. Moreover, the rise of ecommerce

In fact, as I write (early November, 2013) the Tory led UK coalition government is supporting a move to establish a *Transatlantic Trade and Investment Partnership* deal with the US that is intended to remove the regulatory differences between the US and European nations. If passed, corporations will similarly be able to obstruct numerous attempts by any UK government to intervene in the economy or polity on behalf of UK households (for example by freezing energy prices).

⁷Thus Starbucks, like many other companies concerned with the supply of coffee, sources its UK coffee from a wholesale trading subsidiary that is located in Switzerland, a country that charges a relatively paltry 12 % tax rate on the trading profits.

Google, meanwhile, takes advantage of the conditions offered in Ireland, locating its two data centres there, employing 3,000 people to co-ordinate marketing and sales of advertising space across Europe. In fact, Ireland, in recent times, has gone out of its way to lower tax rates in order to attract this kind of business.

makes matters even more complicated for any regulatory body, as services can be delivered remotely.⁸

Certain countries, needless to say, go out of their way to provide low tax regimes for corporations precisely to entice them to establish subsidiaries within their boundaries. Where countries do not do this, the regulatory bodies typically respond by seeking not to undermine or destabilise corporations or their mechanisms but novel ways of adjusting to, or accommodating to the latter's effects; in this way they engage in a negative form of 'relational steering' (Donati 2013).

The latter, though, is easier said than done. One possibility often discussed is for the tax authorities in question to move away from corporation tax (taxing profits, which can be easily shifted abroad) towards taxing sales via VAT. However, this too poses difficulties, because of varying VAT rates across counties.⁹

Another possibility often examined is that of levying all taxes at the site of the head office, especially if it is in a country like the UK or US where tax rates are relatively high (and if necessary distribute proportions to countries where parts are located on, say, some pre-agreed basis, thus removing the incentive for subsidiaries to seek low tax havens). But this too is easily circumvented. Actually, the UK tax structure is already formulated in such a way that corporate groups are taxed as a whole rather than on the basis of their separate subsidiaries, etc. But there are so many tax loopholes, special deals, and related schemes that the corporation is usually able to find some way of evading paying taxes none the less.¹⁰

⁸ Working out the proportion of the surplus of a company like Amazon that is actually generated in the UK (and therefore should be subject to UK tax) is not a simple matter.

⁹ Currently, for example, when a customer buys a book 'on' Amazon.co.uk, the customer actually enters into a legal contract with, and pays the fee to, Amazon Luxembourg, where the VAT rate is just 3 %.

¹⁰ An example that affects the UK currently is known as the Eurobonds scheme. Various corporations (for example the food chains Café Rouge, Nando's, Pizza Express, Prêt A Manger and Strada, and high street retailers such as BHS, Maplin, Office and Pets At Home – see Corporate Watch, the *Independent*) reduce their taxable profits by borrowing from their 'owners' via the Channel Islands Stock Exchange. These 'owners' (mostly private equity funds) could put their money into acquiring additional shares in companies they are said to own. But instead of doing so, they lend the money to companies. The interest on the loans cuts the UK companies' taxable income each year and the exemption – triggered because the loans are listed on the Channel Islands Stock Exchange – means the interest goes to the owners tax free.

Thus according to the *Independent* newspaper (14/11/2013):

"The Gondola Group – which owns Pizza Express, Zizzi and Ask – has avoided as much as £77 m in UK corporation tax since it was bought by the Cinven private equity fund in 2006. Cinven loaned Gondola more than £300 m at a 12.5 per cent interest rate but only invested £8 m in equity. Instead of receiving the interest payments on the loans every year, Cinven has allowed it to accrue on the debt, compounding the amount taken off Gondola's profits every year. When Cinven sells the restaurants, which it is reportedly considering, it can receive the £276.8 m it is owed tax free.

Gondola's UK corporation tax bill last year was only £200,000, after an operating profit of £39 m. In 2011, it recorded a tax credit of £5.8 m. Cinven also owns Spire Hospitals and Partnerships in Care – healthcare companies that The *Independent* revealed earlier this week were using the same

Whilst those concerned with such activities are continually seeking ways to modify tax regimes, close tax loop-holes or coordinate tax-rules internationally, I want to pursue a different set of questions. What is it about the modern corporation that allows it to act in this way in any case? What sorts of structures make the mechanisms of transfer pricing, borrowing from shareholders, and such like, feasible? What does it really mean to say that a corporation with a head office in say the UK or the US can locate subsidiaries with different operations in different countries? What are a subsidiary, a head office, and all the other numerous familiar

arrangement. Pizza Express and Zizzi have previously been criticised for their poor pay. Pizza Express sacked a waiter who revealed the company kept 8 % of tips as an “admin fee” in 2009 while in the same year Zizzi staff were paid £4.25 per hour before tips were added. Gondola did not give more up-to-date information on its pay.

Tragus Group, which owns the Café Rouge, Strada and Bella Italia chains, may have avoided more than £13 m in tax after accruing £47.7 m in interest on 17 % Eurobonds it owes to the Blackstone private equity fund, which owns the group through a Cayman Islands subsidiary.

The electronics retailer Maplin accrued interest of £68.9 m in 2012 on borrowings from its owners, Montagu private equity. However, a spokesman argued that the majority of the interest cannot be taken off its tax bill following negotiations with HMRC. Interest of £361 m has accrued over the previous 5 years, on top of the £137.5 m it originally borrowed from Montagu at 16.5 %. It is unclear how much tax had been avoided because Maplin would not disclose the figures involved – or how long the interest had been disallowable for, but the potential savings could still be in the tens of millions.

Sir Philip Green’s wife, Lady Green, brought BHS into the family’s Arcadia group, which also owns Top Shop, by investing through the Channel Islands Stock Exchange in 2009. The group deducted interest of £13.5 m from its taxable profits in 2012, avoiding £3 m. in tax.

Prêt A Manger owed £237.9 m to its owner, the Bridgepoint private equity fund, at the end of 2012. The loans were listed with at a 12 % interest rate but a spokeswoman told *The Independent* that they were only allowed to deduct 45 % of the interest from their income with HMRC’s approval. They have since repaid £150 m of the loans.

Tim Hames, director general of the British Private Equity and Venture Capital Association, said: “The retail sector is one which has suffered deeply since the financial crisis. But there are at last signs of a genuine recovery, much of it brought about by putting investment to work and creating value.”

A spokesman for BHS and Arcadia said the figures were accurate but gave no further comment. Tragus and Silverfleet Capital, which own Office, said they complied fully with all relevant legislation. Pets At Home said the company was acting within the law and had expanded its business.

Nando’s said that the loans were the most efficient way to accelerate its growth in Britain. “Nando’s Group Holdings Ltd” incurred corporation tax of £10.4 m on an operating profit of £41.9 m in the year ending February 2012. Nando’s growth has been funded by a combination of equity and debt,” a spokesman said.

Gondola said it “works closely with HMRC to ensure that we pay the right taxes. Our structure is in line with a significant proportion of UK companies, in the high street and beyond. We are also a substantial contributor to the UK, having paid £200 m in taxes in the last 3 years, created 3,200 British jobs and invested £300 m in the last 6 years”.

A spokeswoman for Prêt did not dispute the figures but said it was “misleading” to call it tax avoidance. She said: “Prêt pays a fair amount of tax given the business’s profit levels and its continued investment in growth, building more shops and creating more jobs. Our 2012 operating profits before interest were £22.5 m and we paid £7.5 m in tax.”. See <http://www.independent.co.uk/news/uk/politics/eurobonds-scandal-the-high-street-giants-avoiding-millions-in-tax-8897591.html>

sounding, but rarely examined components (e.g., a holding company) of a modern corporate structure; and what is the nature of the relations that binds them?

In fact, three quarters of a century after Ronald Coase (1937) first questioned ‘the nature of the firm’ ‘there is little evidence that there is much agreement amongst economists, corporate governance theorists and others even as to the nature of the basic entity in question, let alone of the firm in its complex modern *incorporated* multinational forms. Here my focus is specifically on the nature of the modern company/corporation. Suspecting that the focus ought to be more on seeking ways to de-stabilise rather than to harness (relationally steer) the corporate mechanism, I am interested in questioning the structural features that underpin the widely held assessment that the corporate mechanism, which so clearly bears on widespread social change, is too often beyond the control of regulatory bodies, sometimes to the point of appearing to be almost out of control. What then are the basic structural conditions? My thesis, as I say, is that central to it all is a somewhat bizarre matter of social positioning. However, defending, and indeed explaining, this claim requires a good deal of initial ontological elaboration. I turn now to the latter.

10.2 Social Positioning

A fundamental, indeed integral and constitutive, if often barely recognised, feature of all social life is a pervasive, if always changing, structure of social positions with various associated properties. In consequence, an equally fundamental, if again often unrecognised, feature of social life, a factor at the heart of many mechanisms of human development, including large scale social change, are processes whereby such positions and their properties are created, reproduced, transformed and, no less significantly, allocated. This is a thesis I have elaborated elsewhere (for example Lawson 2012, 2013, 2014a). I will argue that it is this very matter of positioning that lies at heart of the beyond-control, and the often held to be out-of-control, mechanisms that are the properties of the modern corporation.

As I am now turning to systematising a thesis in social ontology let me seek to clarify my use of various terms. By the social realm I mean the set of all phenomena whose existence necessarily depends upon human interaction. Social phenomena are thus emergent, meaning novel or unprecedented in the sense that prior to human interaction they did not exist. Elsewhere I have defended a naturalistic conception of emergence whereby novel phenomena at all levels of reality arise as (novel) organisations of (albeit perhaps involving modifications to) elements of reality that were already in existence.¹¹

¹¹ Thus elementary particles such as quarks arise as excitations of quantum field activity, and subsequently combine to form composite particles or hadrons, including protons and neutrons, collectively referred to as nucleons, where these combine with electrons to form atoms, which chemically combine to form molecules, where the latter bond, perhaps through collisions, to form

There are essentially two general types of emergent social entity along with their equally emergent organising (social) relational structures that concern me here, both of which regularly evolve novel forms.¹² The first can be called *artefacts*, consisting mostly of organisations of physical components, with the latter components themselves constituted as organisations of elements that pre-existed them, etc. The second type of emergent is constituted by organised sets of human individuals and artefacts. These can be called *communities* and will typically include smaller or nested (sub) communities amongst their components.

In the case of communities, individuals are bound together through their occupation of a subset of a potential multitude of *positions* formed within, and structuring, any community, and linked via matching, possibly multiple, sets of *rights and obligations* (each relating to an associated [set of] collective practice[s]). In other words, positions like university professor, university lecturer, student, university administrator etc., are constituted by (internal) relation to each other, the relations taking forms of rights and obligations.

Thus, being positioned, as I am, as a Cambridge academic I am a bearer of the associated (positional) rights to use university facilities, including an office, libraries, lecture halls, internet facilities, receive a salary, and so on, just as I am the bearer of the obligations to give lectures, set and mark exams, give supervisions, sit on administrative committees including library committees, and so forth.

In each case, the rights I can access are matched by obligations born by other parties, just as my obligations facilitate the rights enjoyed by others. Thus some others have the obligations to maintain the university facilities including libraries, offices, and lecture halls, and internet resources to which I enjoy access, just as students have rights to attend lectures, and expect their exams to be fairly assessed etc.

The rights and obligations that relate the various positions are (positive and negative) positional powers. They are powers in the sense that the agents of rights (positive powers) have the causal capacity intentionally to get others, the subjects of those rights (those that bear the relevant linked obligations, or negative powers) *to do something whether or not the latter want to do that something*. Obligations give reasons for action (that are additional to, and independent of, the preferences of individuals so positioned), and power exists so long as the subjects in question are willing (and able) to fulfil their obligations. Clearly all social relations that consist in matched positional rights and obligations are power relations.

Notice that the social identities of different human beings depend on the (unique set of) positions occupied, where the positions are properties of the communities to which the individuals belong. A given individual is (takes on the social identity of) a university lecturer if positioned as a university lecturer, a prime minister if positioned as a prime minister, a UK citizen if positioned as UK citizen, a queen, bus driver, football manager, doctor, ballerina, and so on if appropriately positioned. To

proteins, water, planets and all life forms including ultimately human beings, who, to return to my current focus, interact to bring into being the relationally organised entities of the social world.

¹²A third type that I will not be considering is language.

distinguish position from occupant I will henceforth capitalise the first letter of the former (so that a lecturer occupies the position of Lecturer).

Social identities of artefacts are acquired in the same way: through being positioned in a relevant community. A large sea-pebble may become a paperweight in the community of my household if appropriately positioned, various (complexly designed) pieces of paper and/or bits of metal be constituted as money (notes and coins) or passports or wedding rings, etc., in a particular community if appropriately positioned. Even a building constructed to serve, say, as a church may be identified instead as a home if appropriately positioned, and so on. Of course, with the positioning of an artefact, rights and obligations are not obtained. Instead, certain of the artefact's causal powers become interpreted as its characteristic function set(s), according to how it indeed functions in the system(s) in which it is positioned. Thus the causal capacity of the large sea pebble placed on my desk, which becomes its positional function is that of weighing down papers, i.e., of preventing my papers from blowing about (as they otherwise might if I have the window open on a hot but breezy day). Clearly the aim always is to position an object such that the system function intended for it is actually amongst its pre-existing causal capacities (a feather could not reasonably be positioned as a paperweight).

10.2.1 Mechanisms of Social Change

If this is the conceptual framework why do I suggest that positioning can be a significant mechanism of social change? That is, why do I suppose that processes whereby such positions and their properties are created, reproduced, transformed and allocated are or can be mechanisms of social change, including of very significant social change?

Looking at it first from a different angle (or direction of causation), it is of course hard to imagine significant social change that did not result in processes whereby such positions and their properties are created, reproduced, transformed and allocated. Revolutions including popular uprisings necessarily involve the creation and or transformation of social positions.

This is even, or perhaps especially, so in the case of technological revolutions where it is the case both that new positions are found for emergent artefacts with novel capacities, or the latter are substituted for old artefacts, and also that positions for skilled operatives are rendered redundant or transferred in location (see Lawson 2014a).

But change can come about merely through, and as a result of, repositioning. Unlike physical objects, the positioned components of communities include intentional human beings, and the latter are able actively to seek occupancy of more powerful positions or to transform the powers associated with those positions that are already occupied, or even to relocate across the globe the positions of an established community. Matters related to positioning are usually contested, especially in the workplace. Although it is possible to imagine forms of human society in which

the structure of power relations is (as in many households) designed with the aim of facilitating human flourishing (see Lawson 2014b), this is not the nature of capitalism. Rather the system is all about the pursuit of power over others where the flourishing of those others is very often barely a consideration.¹³ In this manner, changes in technology are harnessed by those in power in ways that transform the labour processes worldwide often resulting in untold damage to the lives of many of those involved (see Lawson 2014a).

If all this is easy to see with a little systematic focus, and indeed fairly well understood, I think there are important cases where this is less so. One most significant example of the latter is that of the modern company/corporation. Strangely, although the corporation is the site of an extraordinarily powerful set of mechanisms of social change in the modern world, the structures at the heart of its workings appear to be relatively unexplored.

What then does lie at the basis of the corporation? The feature that underpins all the more consequential, and especially destructive tendencies of the corporation, I believe, is the simple (if counter-intuitive) fact that in law the corporation is, in all its business activities, regarded as a bearer or agent of rights and obligations just as are positioned human individuals. Indeed, it is a bearer of rights and obligations originally designed and intended only for human beings. The corporation is frequently even able to claim to be a subject of natural rights legislation intended for the protection of human individuals. In short the corporation is positioned in society as a legal person. Let me elaborate upon all that is involved here, including how the situation that pertains allows the sorts of manipulative activities described above, as well as how this situation was always historically contested and never an inevitable outcome.

10.2.2 *The Positioning of Communities*

I earlier noted that human beings can be (and indeed always are) socially positioned as can be (and typically are) artefacts. I now observe that communities can be as well. Indeed, for a group of people to function as an ordinary business partnership, or a charity, or a school, in modern societies such as the UK, they *have to be*

¹³I suspect that it is not too contentious to observe that at the heart of capitalism are processes of capital accumulation, the drive to use money (capital) to create more money. But what is the nature of modern money? It is precisely a social relation, a relation of social power. It is in effect a (positional) credit/right and debt/obligation relation that holds formally between (those positioned as the) holders of (positioned) markers of money (e.g., notes and coins) and the body that is (positioned as) the legitimate issuer those markers. However, in the modern community an additional (positional) legal right of any holder of such credit is to be able exchange it for any and all commodities (including labour power) that are available for exchange at conventionally agreed and/or relative-power determined rates (of exchange). So capital accumulation is straightforwardly a process of power seeking (always over others), which has nothing necessarily to do with generalised flourishing.

appropriately positioned as such. The basis and nature of such positioning has changed over time but in modern societies the process of positioning, both in regard to the structuring of the positions themselves and in respect to the allocating of occupants (communities) to them, is a legal affair. Firms, charities, schools, etc., are in the end legally constituted.

We have seen that when an artefact is positioned as, say, a traffic beacon, a chair, or a certificate of some kind, certain of its causal powers become interpreted as characteristic of a (system) function set; whereas when a human individual is positioned, say as a judge or a prisoner, that individual becomes the agent or bearer of powers associated with that position.

The question to pose, then, is what sorts of properties are acquired when a community is socially positioned?

In most cases, or in the first conceptual instance at least, the answer is that the positioning (registering) of the community parallels the positioning of an artefact. That is, a set of emergent powers of the community in question become interpreted as its characteristic function set (according to how this particular community comes to function in the wider [typically national] community).

Thus, at least in the modern UK, an ordinary business partnership (as with all other forms of what are generically referred to as firms) is a particular community concerned characteristically with the co-ordinated production and/or distribution of goods and/or services to be sold to others in a manner that is intended to be advantageous to at least some of its members; a charity is a particular community concerned characteristically with the co-ordinated pursuit of non-profit, typically philanthropic goals, as well as other (educational, religious, etc.) activities interpreted as serving the public interest or common good; a school is a particular community concerned characteristically with the co-ordinated education of one group (students/pupils) by another (teachers); and so on.

However, and significantly, any such positioned community can be further positioned through a process known as incorporation. When this happens the process instead parallels the positioning of a human individual. For in this case the community *qua* a totality acquires a set of rights and obligations. To understand this process I need to elaborate three ontological notions, specifically those of *multiple (vertical) positioning*, of *legal fiction*, and of *legal person*.

10.2.3 Multiple (Vertical) Positioning

Multiple positioning, as the term suggests, occurs when multiple positions are occupied by the same occupant simultaneously. Thus a human being may simultaneously be positioned as a marriage partner, an employee of company X, an organiser of the local dance community, an aunty, and so on. Multiple *vertical* positioning occurs when the positions occupied are effectively nested in (or nesting of) each other. Thus an individual may be positioned as a UK citizen, a member of university

X, a member of the local social ontology group (XSOG), the secretary of XSOG, and so on.

An artefact too may be multiply positioned. A computer may simultaneously function as a time keeping system, a system of mailing, a music system, etc. It may also be multiply vertically positioned, for example as one of a set of tables in a Cambridge College's dining room, as the 'high table', etc.

Clearly, when an artefact is allocated to a position that is additional to, and nested within those already occupied, a further set of causal powers is added to the list of its characteristic functions, whereas when a human individual is allocated to a position that is additional to, and nested within those already occupied, an additional set of rights and obligations is acquired.

The strange case of the incorporation of a community is that it involves a hybrid situation. First, when positioned as an 'ordinary', that is an *un*incorporated business, a set of causal properties is isolated as the characteristic function set; but, with additional positioning through incorporation, a set of rights and obligations is acquired. To understand the process I need to outline the notion of a legal fiction.

10.2.4 Legal Fiction

A legal fiction is usually interpreted as something like a 'fact' assumed or created by courts or other regulatory bodies to enable a legal rule to be applied in a manner for which it was not designed or intended. Mostly, as far as I can determine, the term is used where the outcome is somewhat more specific in that some person or entity is allowed occupancy of a position in order to achieve access to a set of rights or obligations that were never intended for such a person or entity. Certainly, this is a dominant case.

Consider the following illustration. In the UK, any member of parliament (MP) sitting in the House of Commons is technically forbidden to resign. The reason for this is historical. Four hundred years ago or so being an MP was considered an onerous task, and resignations were a frequent occurrence. However, MPs were given a trust to represent their constituencies and, in consequence, a law was passed in 1624 removing the right for an MP to resign. In modern times resignations are not such a problem, but still they remain technically forbidden. To make resignations nevertheless possible in practice a legal fiction is employed. At the time the law forbidding resignations was introduced, and indeed for a good while after, the crown and parliament were frequently at odds, and in competition, with each other. In consequence anyone in an office of profit under the crown was not easily trusted by parliamentarians. Occasionally though, such offices came to be occupied by a few MPs themselves. Because this dual occupancy was considered likely to compromise the MPs in question an exception was made to the earlier law regarding resignations. More specifically, by a provision of an Act of Settlement 1701 (repealed in 1705 and re-enacted in modified form by the Place Act of 1707), an exception was

created to the restriction on resignation. In fact, the MPs in question, who accepted an office of profit under the crown, were actually obliged to resign from parliament (and forced to seek re-election if they wished to stay an MP). Of course, at the time, being in the pay of the crown usually involved a demanding commitment in an office that was not easy available to most people. This, though, was, and has remained, the only exception allowed to the rule that resignations from parliament are forbidden.

With the passing of time such offices of the crown (for which resignations are allowed and indeed compulsory) became less important and indeed often no more than titles. They included sinecure posts like that of the stewardship of an estate that involves negligible if any duties or profit. They remain in the crown's gift nonetheless. This being so, in due course the legal fiction was invented whereby any MP who wished to resign simply applied to the crown for such an office.

During the course of history various offices have been used for this purpose, though only two are provided for in current legislation. These two are the *Crown Steward and Bailiff of the Three Chiltern Hundreds of Stoke, Desborough and Burnham*, and the *Crown Steward and Bailiff of the Manor of Northstead*. These are only nominally remunerated and reside in the formal gift of the Chancellor of the Exchequer. On occupying such a position the individual (who thereby resigns from parliament) usually holds the relevant office until it is again used to effect the resignation of an MP. The two positions noted above are used in this way alternately. When more than two MPs wish to resign at the same time, the resignations are interpreted as not being simultaneous but as spread throughout the day, each member holding one of the offices for a very short period, measured in hours or perhaps minutes.¹⁴

So, to repeat, a legal fiction refers to a device whereby a position or status intended to apply to one set of occupants is, along with any associated rights and obligations, allocated to others of a kind for which the original position was not necessarily intended, in order to achieve a specific outcome.

10.2.5 *Legal Person*

The term *Legal Person* names one such position that is allocated in this way. It is a position such that any occupant acquires the right to bear various other (albeit typically a restricted set of) rights and obligations that exist in a wider (typically

¹⁴The device or procedure in question, an example of a legal fiction, was invented by John Pitt when he sought to vacate his seat of Wareham in order to stand for Dorchester. In May 1750 Pitt wrote to the then Prime Minister Henry Pelham notifying him that he had been invited to stand for Dorchester, and asking for "a new mark of his Majesty's favour" in order to change his seat. Pelham wrote to William Pitt (the elder) indicating that he would intervene with King George II in support, and on 17 January 1751 Pitt was appointed to the position of Steward of the Chiltern Hundreds, and was subsequently elected unopposed as member for Dorchester.

national) community. Although sets of rights and obligations were originally intended only for human beings, they came in due course to be extended to specific communities through the legal fiction of their being positioned legally as (legal) persons.

The reason for adopting this particular legal fiction has seemingly always been to achieve, in the first instance at least, a separation between those rights and obligations widely considered desirable as acquisitions for *specific individual* members of any particular community and others considered desirable as acquisitions for that same community as a *whole*, that latter understood as an irreducible entity, and interpreted as a formally/legally separate one.

It is via such a device that the modern company/corporation has come to be the agent of rights and obligations intended only for human beings. However, whatever the reasoning whereby the device was first constructed, the purpose certainly was not to facilitate the activities of the modern company/corporation, even though this is now a dominant application.

An early example is associated with Pope Innocent IV (1195–1197), who used this ‘*persona ficta*’ as a means of separating the rights and obligations acquired by monks (who could own nothing, but could be sued for legal wrong doings) from those other rights and obligations considered appropriate to allocate to their monastery (which in becoming a legal person could formally own assets but, in lacking a soul, could not thereby be considered negligent or be excommunicated).

The way this effectively works (at least in modern times) is that the position of Legal Person contains two sub-positions, those of Natural Person and Juridical Person (also sometimes referred to as Juristic or Artificial or Fictitious Person), and within the position of Juridical Person are various other positions including (in the UK) the (limited) Company.¹⁵ It is by positioning a firm as a limited company, a process that, as noted, is known as incorporation, that the firm *qua* company automatically acquires the status of a juridical and so a legal person.

In this way a firm *qua* company acquires numerous rights originally intended only for human beings. These include those of owning assets (houses, boats, shares, etc.), contracting, suing, and being sued, and so on. The basic advantage of incorporation is that it allows both the firm as a whole and the individual members considered separately to be protected from the misdemeanours, financial failures, and particular limitations of the other (humans die and pay death duties, but companies might last for centuries). The modern notion of limited company is an example.

¹⁵Communities other than firms can be repositioned, and specifically social communities other than companies can be regarded as juridical and so legal persons. Indeed, the notion of a legal person (which is now central to ‘Western law’ in both common-law and civil-law countries and can be found in virtually every legal system) can apply to cooperatives; customer owned mutuals; charities, municipal corporations or municipalities; European economic interest groupings; sovereign states; various intergovernmental organizations (the United Nations, the Council of Europe) and other international organisations.

10.2.6 *The Limited Company/Corporation*

With incorporation a company issues shares; with the most common form of company being a private company limited by shares.¹⁶ This is an (incorporated) company whereby, in the face of financial problems, the shareholders' liability is limited to the original value of the shares issued but not paid for.

Thus, suppose a particular shareholder in the limited company has, say, 1,000 shares originally valued at £1 each. If the company fails, and at the time of its doing so, the individual shareholder in question has paid for 100 of these shares, it means that he or she is liable only up to the original value of shares they have not paid for, namely £900. Importantly they are not liable for the full loss of the company where the latter exceeds the shareholder's investment. So in a company, shareholders, directors and officers typically are not liable for most of the company's debts and obligations. Rather any debts run up by the firm *qua* company are rationalised as the property of the company, not of the shareholders. For this reason, a company tends to be referred to as a business with limited liability.¹⁷

In comparison, in the case of, say, an ordinary (unincorporated) business partnership, the partners are jointly responsible for all the liabilities of the business, such as loans, accounts payable and legal judgments, etc.

In similar fashion, because the company is considered legally separate from the community that is so positioned, the company and its assets are protected from the misdemeanours of individual members of the community and others closely associated, and in particular the shareholders. Where a shareholder is personally involved in a lawsuit or bankruptcy, etc., a creditor of a shareholder of a company cannot seize the assets of the company. Or rather the creditor can seize ownership shares in the company only in as far as they are considered a personal asset of the shareholder in question.

A further benefit of incorporation is that 'ownership' *claims* (whatever their actual status) on a business are more easily transferred to others. Where a firm is unincorporated the process of selling or giving away ownership claims can involve a complex process wherein property is retitled, new deeds are drawn, and other administrative chores need to be undertaken. In the case of a company, all of the

¹⁶Other forms of company are a private company limited by guarantee, wherein directors or shareholders financially back the organisation up to a specific amount if things go wrong; a private unlimited company where directors or shareholders are liable for all debts if things do go wrong, and a public limited company where shares are traded publicly on a market, like the London Stock Exchange.

¹⁷Of course, there are exceptions or better limits to limited personal reliability for those who own shares in a company. The latter shareholders may be held personally liable if, for example, they personally and directly injure someone; or personally guarantee bank loans or business debt on which the company defaults; or fail to deposit taxes withheld from employees' wages; or intentionally do something fraudulent, illegal, or reckless that causes harm to the company or to someone else; or treat the company as an extension of their personal affairs, rather than as a separate legal entity. In the latter case a court might decide that in this case the company as such does not really exist and find that its owners are in effect doing business as individuals who are personally liable for their acts.

individual's claims to ownership rights and privileges are represented by the shares of stock they hold, which can be easily and quickly transferred, usually merely through adding a signature.

In turn, the ease of transferability of shares, along with limited liability makes incorporation attractive to new 'investors'. And of course, as incorporation renders a business a legally constituted component in a wider legally constituted totality it provides access to a reliable body of legal precedent to guide owners and managers in their conduct.

Significantly, it is the basic feature of limited liability, the fact that any debts run up, or misdemeanours committed, by the firm *qua* company are rationalised as the property or doings of the company *per se*, not of the shareholders, that explains the sorts of manipulative operations of companies noted at the outset. For, as legal persons, companies themselves can now be shareholders in other companies, and so reduce their liability in any situation where these other companies including their subsidiaries get into trouble or are caught committing misdemeanours. Before exploring this issue and the possibilities opened up by incorporation, I first want to indicate that the situation that has emerged was in no way natural or inevitable, and it was certainly not uncontested.

10.3 A Brief History of the Company/Corporation

Currently, the idea that a firm can be incorporated as a limited company is somewhat taken for granted. But it is worth recalling that even following the introduction of the idea of legal personhood into the UK the path leading to the current situation has been anything but smooth. Contestation has longed raged over various issues, including the types of communities that could be positioned as legal persons; the specific rights and obligations that could be acquired for those that were so positioned; as well as over which bodies were to make any relevant decisions relating to such matters. In particular, from the outset, and regularly since, the idea of granting legal-person status to profit-seeking communities has been severely resisted. A brief consideration of these matters is likely useful in conveying how the current components of the process of incorporation were never a natural unity, along with the possibilities of their transformation or disengagement.

10.3.1 *The Origins of the Modern Company*

Prior to the seventeenth century the only communities in the UK that were positioned as legal persons and so qualified as corporations were in fact not-for-profit entities¹⁸; they comprised charities, which included schools, universities, hospitals, churches,

¹⁸The device of incorporation likely arrived in the UK as a result of the Norman Conquest.

etc., and eventually municipal councils. As such these corporations had various rights such as owning buildings, land, and so forth.

Each possessed constitutions, drafted and approved by the crown or the government, setting out the incorporated community's rights and obligations along with the objectives it sought to attain. If a corporation acted inconsistently with its constitution, that is, if it acted "*ultra vires*" (or beyond its legal powers) the courts had the power to declare the offending actions void and unlawful. During this time, it was clearly *ultra vires* for any such charitable community to seek to undertake commercial activities in order to make a profit.

When the UK's first profit seeking corporation, the (English) East India Company, obtained that status of a corporation in the early seventeenth century, it did so illegally; that is, it came to occupy the position of a Corporation not via any action of the crown, government or the courts but solely through the actions of its members.

It happened that towards the end of the sixteenth century the crown granted charters of incorporation to 'trade associations'. These not-for-profit communities thereby became corporations. As trade associations they did not carry out trade in their own names, but were granted a monopoly over a specified area of trade. Business partners could become members of the trade association and thereby entitled to carry out business in that trade. However, any such partnership would trade separately, with its partners sharing ownership of the firm's assets, as well as responsibility for its activities.

The English East India Company started as one such trade association. It received its royal charter in 1600, enabling its members to share in the monopoly of trade in the East Indies for the following 15 years. In the period that ensued, the individual members/partners took a highly significant series of actions. First, they started to amalgamate their stock until they became one large partnership, jointly owning all the stock, and carrying out all the trade. Later the ownership of this (jointly owned) stock was transferred to the company itself (which being a corporation was allowed to own assets). In place of their shared ownership of the stock of a business partnership the partners acquired a share in the joint stock of the corporation. The corporation subsequently traded this stock in its own name and made its own profit, which was then distributed amongst the members/shareholders. In this way the East India Company became the first UK Corporation to operate for a profit.

Although the East India Company was clearly in this manner acting in an *ultra vires* fashion, this went unchallenged in the courts and elsewhere. In fact, until the Bubble Act of 1720, the crown, on observing the apparent successes of the East India Company, granted charters to new companies expressly for them to trade as commercial corporations. In due course, new commercial corporations were formed by both royal charter and act of Parliament in order to develop new patents and domestic trade, by this time seeking outside investors to provide the finance.

But the situation then as now provided various opportunities for the unscrupulous easily to exploit, and was not stable. By the start of the eighteenth century highly suspect corporations were being unmasked where individuals were found to be merely masquerading as commercial corporations and fraudulently seeking out investors' funds. In addition the South Sea Bubble and other financial scandals of

that time caused further losses to ‘investors’. With corporations bearing the responsibility (rather than shareholders) the victims could not easily get recompense; nor could the courts penalise them (as corporations, for example, could not be imprisoned). So the government felt it necessary that the corporations be reined in.

Many in this period were wound up or nationalised. The Bubble Act of 1720 legislated that all commercial undertakings (not just in corporations) would be illegal that tended “to the common grievance, prejudice and inconvenience of His Majesty’s subjects”. The law also banned speculative buying and selling of shares; they could be bought only by persons genuinely taking over a role in running a firm.

However, everything changed again between 1825 and 1856 as a series of Acts of Parliament relaxed the controls on the creation of commercial corporations. Modern companies, as noted earlier, are known as limited companies and it during this period that limited liability became established.

In 1825 the Bubble Act was repealed, allowing shares to be freely traded. In 1844 William Gladstone (then president of the Board of Trade) pushed through the Joint Stock Companies Act. This allowed companies to dispense with the need for a special charter; thereafter they could be incorporated by a single act of registration. However, it did not include the right for shareholders of automatic limited liability, which was strongly opposed by many liberals. Limited liability came 10 years later in an 1855 Limited Liability Act after a series of heated debates. This, however, carried various qualifications that were removed by the 1856 Joint Stock Companies Act which allowed firms to obtain limited liability with “a freedom amounting almost to license”.

The primary reason for the change in this period was the building of the canals and railways and similar projects requiring large agglomerations of capital. The way of achieving this was through chartered joint stock companies. By 1840, for example, 2,000 miles of railway track had been laid, entirely financed by chartered joint stock companies (Micklethwait and Wooldridge 2003, p. 47).

Even so, right into the late nineteenth century the courts were still reluctant to give shareholders the full benefits of limited liability or indeed to recognise fully that profit seeking corporations had a separate legal personality; and they made it clear in a series of rulings that in their view the courts controlled corporate behaviour.

However developments were never smooth, and there were a number of successful challenges to court rulings. None was more significant than the case of *Salomon v Salomon and Co. Ltd.* in 1897. Aron Salomon made and sold leather boots and shoes in his establishment in Whitechapel in East London. Eventually, he turned his business into a limited company. His wife and five eldest children became subscribers and two eldest sons also directors (to comply with the Companies Act of 1862 which required a minimum of seven members). Salomon took 20,001 of the company’s 20,006 shares for himself. The price fixed by the contract for the sale of the business to the company was £39,000. In an ensuing action the court found that this was “extravagant” and not “anything that can be called a business like or reasonable estimate of value.” Transfer of the business took place in 1892. The purchase money the company paid to Salomon was £20,000. It additionally gave him £10,000 in

debentures (in other words, Salomon gave the company a £10,000 loan, secured by a charge over the assets of the company). The balance paid went to extinguish the business's debts (£1,000 of which was cash to Salomon).

Soon afterwards the company got into financial difficulties holding stock it could not sell. Salomon and his wife lent the company money and he cancelled his debentures. But the company needed more money. It succeeded in obtaining a £5,000 loan from a Mr. Edmund Broderip. But Salomon's business still declined, and he could not keep up with the interest payments. Eventually the company was put into liquidation. To cut a long story short when Broderip failed to realise his unsecured loans he instituted an action claiming that Salomon was personally liable. The High Court and Court of Appeal held Salomon to be liable. However, upon appeal to the House of Lords, the latter overturned the decision arguing that a company had been duly created and cannot be deprived of its separate legal personality.

Despite this the courts continued to maintain the doctrine of *ultra vires*, in effect restricting how a commercial corporation pursued its activities. Only with the Companies Act 1989 was this action by the courts effectively ended. The Act required commercial corporations to continue to include a statement of their objectives in the constitution. But, under section 3A, the Act permitted the corporation to (a) state simply that it was a "general commercial company" and (b) that the corporation had "power to do all such things as are incidental or conducive to the carrying on of any trade or business by it". Further, in section 35(1) of the same Act the law was transformed so that "the validity of an act done by a company shall not be called into question on the ground of lack of capacity by reason of anything in the company's [objects clause]".

So in short, over the course of 400 years, the state, which at first was opposed to granting corporate status to profit-seeking communities, had first imposed, but ultimately abandoned, all of the many devices and mechanisms designed to restrict corporate activity where the latter was perceived to be at odds with the public interest. If the idea of a for-profit company or corporation is currently taken-for-granted, as a familiar component of the modern social landscape, such a strange entity has not been widely well-received at all for the most part of its own history.

However, if the legal component of the regulatory system has tended to act as a negative feedback mechanism throughout the majority of corporate history, this is no longer the case in the contemporary world as we shall see. Indeed, the legal system now in effect works as a positive feedback mechanism accentuating features of the corporation that underpin both its ever expanding power as well as any apparently out-of control aspect of it.

10.4 The Modern Situation

So how does all this bear on the observations made at the outset? Specifically, how does the conception elaborated illuminate the workings of the corporate mechanisms whose effects are so undermining of current taxation authorities?

A central and relevant feature is that any corporation has a legal status that is separate from those of its individual members. An additional if related significant feature is that any corporation can establish a set of separate entities, perhaps situated in different countries, legally own the latter's shares and thereby constitute each of the latter as (seemingly partly or wholly owned) subsidiaries, each with a separate legal status, where any such subsidiary can also spawn further subsidiaries ad infinitum. This means that a mechanism is in place for generating structures that provide opportunities for endlessly transferring liabilities in a dazzling variety of ways.

A component of such a structure may even be a simple *holding company*, namely one that typically does not produce any goods or services itself; rather, its purpose is merely to own shares of other companies. Specifically, it owns their outstanding stock (stock or shares *outstanding* refers to all the financial assets or shares that have been authorized and issued by the company and *not* held by the company itself; those held by the company itself are termed *treasury* shares; shares outstanding plus treasury shares together comprise the number of shares issued).

So, by endlessly exercising the rights of legal personhood, all multinational companies are able to, and do, organise their operations through multiple subsidiaries; they organize their businesses into national and functional subsidiaries, often with multiple levels of subsidiaries. However, subsidiaries are separate, distinct legal entities for the purposes of taxation, regulation and liability. As a result, with a parent company and any subsidiary being regarded as separate entities, it is entirely possible for one of them to be involved in legal proceedings involving bankruptcy, tax delinquency, indictment and/or otherwise be under investigation, while the other is not. In other words, a subsidiary can sue and be sued separately from its parent and its obligations will not normally be obligations of its parent.

Such relations have only to be stated for possibilities of abuse through the shuffling of both existing liabilities, and perhaps especially expected future liabilities, to be imagined. This, of course, stretches beyond tax liabilities to liabilities for destruction and corporate murder amongst much else.

Murder and personal injury are actually important issues to raise in this context, given how many people are killed or injured as a result of corporate activity. Although courts often use precedents set for human beings in deciding cases relating to corporate rights and responsibilities, criminal courts have found that companies cannot be held liable for murder or indeed for any criminal acts requiring intent because they do not have a state of mind.

This latter assessment may appear reasonable when taken at face value. However the courts seem to recognise a state of mind in allowing that corporations can be aggrieved by the actions of others and permitted to sue for defamation. They further appear to recognise a state of mind in allowing that corporations have the right to freedom of expression. Thus, corporations sued for misrepresentation in media and other outlets need not demonstrate that what they said was true, but merely have to establish that they have the right of freedom of expression.

The latter powers are either facilitated or bolstered by the fact that in some countries companies claim rights under human rights acts. Thus according to the 1998 UK Human Rights Act, for example, incorporated companies can claim a right to a fair trial, and cannot be forced to incriminate themselves, meaning they have a right to withhold or conceal relevant documents in cases contested in law.

Of course, even where a company *is* found liable for something, it cannot be imprisoned or set to work in the community; in practice the only punishment typically metered out is a fine, something it can usually easily afford, the expectation of which will frequently have been built into its undertakings.

If, however, there are circumstances where a company cannot pay its fines, or it otherwise seeks to avoid doing so, the losers will not be the shareholders. For limited liability means, as we have seen, that the shareholders are not responsible for the company's debts beyond the value of shares yet to be paid. Nor can shareholders be held responsible for any civil or criminal offences that may have been committed. Rather, in such cases the company typically avoids paying not only its numerous creditors, but also any wages that may be owed to workers as well as civil damages. Meanwhile, and for essentially the same reasons, corporate decision makers are extremely unlikely to be held responsible for the consequences of the corporate mechanism.

So a company, or its set of director agents, ultimately has every incentive for it, or one of its subsidiaries, to take manifestly irresponsible, potentially damaging, and even life threatening, risks where the possible potential benefits are significant. Indeed, if or where it is maintained (however erroneously) that there exists a legal obligation for the corporation to serve the financial interests its shareholders (a matter I turn to below) it could be well be argued that they ought to. For where the risks pay off in the sense that significant profits are realised, the shareholders benefit substantially; where things go wrong, even terribly so, these same shareholders have very limited liability.

To illustrate how this can work in practice consider the case of Cape Industries plc, a UK-based company that between 1953 and the late 1970s, operated the US-based marketing subsidiary *North American Asbestos Corporation* (NAAC) to trade in asbestos. Other subsidiaries of Cape mined asbestos in South Africa. This was shipped to NAAC based in Texas. Over the years groups of workers of NAAC became ill after handling the asbestos, and in the early 1970s they brought an action against the NAAC, being awarded damages of US 5.2 million dollars. Rather than pay the damages, NAAC went into liquidation, with its operations taken over by a new marketing company Continental Productions Corporation (CPC), funded, but not owned, by Cape, operating on the same site as had NAAC, and with the same managing director (who also held all the shares). With Cape holding no assets in Texas, the workers sought to bring an action against Cape (*Adams v Cape Industries plc* [1990]) in the UK on grounds of justice, namely that it is only fair and reasonable that Cape be held liable for its former subsidiary which it had clearly liquidated to avoid paying damages. The court, however, for just the sorts of reasons discussed above, found that Cape was not at all liable in law. In so ruling Lord Justice Slade reasoned as follows:

...save in cases which turn on the wording of particular statutes or contracts, the court is not free to disregard the principle of *Salomon v. A Salomon & Co Limited* [1897] AC 22 merely because it considers that justice so requires. Our law, for better or worse recognises the creation of subsidiary companies, which though in one sense the creatures of their parent companies, will nevertheless under the general law fall to be treated as separate legal entities with all the rights and liabilities which would normally attach to separate legal entities [...]

If a company chooses to arrange the affairs of its group in such a way that the business carried on in a particular foreign country is the business of its subsidiary and not its own, it is, in our judgment, entitled to do so. Neither in this class of case nor in any other class of case is it open to this court to disregard the principle of *Salomon v. A Salomon & Co. Limited* [1897] AC 22, merely because it considers it just so to do.

Such decisions may not be stable.¹⁹ But they clearly indicate the sorts of possibilities that arise, given the modern structure of interlinked but (often internationally) separate legal entities each claiming legally limited liability. In truth the permutation of possibilities seems endless. Of course, the law like any other social structure is being repeatedly transformed. But so long as companies can combine the advantages of control over decisions, legal separateness, limited liability and legal personhood, then opportunities for shifting, avoiding and/or trivialising liabilities of all kinds are clearly always available.

10.5 The Question of Control

Why precisely though does the modern corporation sometimes give the appearance to many of being not only beyond control of regulatory authorities but also in a real sense out of control? The answer is that there is often no agency that feels or acts as if it can easily assume responsibility for a corporation's actions; certainly none that feels it must. Let me elaborate this claim.

One significant party of course is the body of shareholders. It is often held that legally the shareholders own the firm; though in fact they do not and indeed the very notion of ownership of a community is really nonsensical. In actual fact, the shareholders typically have very little if any say in the day to day decision making of the corporation. Of course, it is frequently the case that dominant, or anyway many significant shareholders are themselves other corporations (for example, in 2009 so-called 'institutional' investors collectively 'owned' 73 % of the outstanding equity in the 1,000 largest U.S. corporations²⁰), not at all well placed to take part, even in principle, in every-day decisions. The feature that is most relevant here is that the shareholders are limited in their liability if things go wrong. But this is a far cry from supposing that they determine what happens.

¹⁹For a discussion see Stephen Griffin 2006, pp. 23–5.

²⁰See "Conference Board Report", The Conference Board, 2010 Institutional Investment Report: Trends in Asset Allocation and Portfolio Composition, November, p. 22.

Another significant party is the board of directors of any company, in whose hands indeed lays the task of day-to-day decision making. However, the dominant modern interpretation of the law, certainly in the UK, has it that, no matter how responsibly or morally minded any of the individuals involved may be, the duty of those directing the day-to-day affairs of the corporation is to serve the interests of the shareholders.

This actually is not formally the case. However both economic and legal theory has long played a significant role in creating the impression that it is. Analyses of the firm emanating from economics over the years, originally inspired by Coase (1937), have focused on providing very particular (functionalist) explanations of the existence of the firm. In tandem, contributors to legal studies or corporate governance, inspired especially by the 'law and economics movement' associated with Richard A. Posner (1972), have tended to accept (in an overly uncritical fashion) these contributions from economics as realistic, and sought in turn to use them in their interpretations of the legal system. Specifically, they have used these assessments from economics in their efforts both to reveal the economic structure of the legal framework underpinning the firm and also to seek ways to theorise, and thereby reinterpret or otherwise modify, the workings of relevant aspects of the legal system so that it better facilitates the firm's functions as identified in economics.

Since the mid-twentieth century, the dominant of the two basic ideals for the firm *qua* incorporated entity that have most influenced the suggested reforms of legal theorists is the shareholder ideal that all activities within the firm are ultimately the responsibility, and for the benefit, of the shareholders (the alternative being the stakeholder ideal that companies are responsible to a wide range of groups in the broader community). Thus, an assessment that has no doubt been inspired by, and co-evolved along with, the emergence of the modern corporation, acts through legal theorising and the latter's impact on the courts to reinforce the conditions that render the firm uncontrollable.

Furthermore, many suppose (again erroneously, and once more under the influence of results from economics) that the legal system insists more specifically that the primary legal obligation or purpose of the corporation in serving the shareholder interest is to pursue maximal profits for (in order to pay maximal dividends to) shareholders.

There are, of course, concerned individuals located at all levels of corporate structures, and it is probably reasonable to accept that it is not merely cynics within the corporation (out to pull the wool over customers' and general public's eyes) that promote the idea of *corporate social responsibility*. This is the idea, inspiring indeed a wide and much discussed movement, that corporations should build into all its decision-making a concern for achieving/maintaining conditions for meeting human needs including a concern for the environment. But whether or not, or whatever the extent to which, such is possible in a competitive environment, these ideals can have little impact if received in a context where the dominant view is that legally companies are primarily responsible to shareholders.

So the result very frequently is a situation where neither the directors nor the shareholders nor any other body have, or feel they have, much say in the nature of

overall objectives of the corporation. In this sense there is, or can be, an effective power vacuum within the corporation, with no one placed, or thought to be placed, with the responsibility for rendering the corporation other than a seemingly uncontrollable profit-seeking juggernaut.

In this way, then, an impression is easily, and indeed seemingly frequently, gained that all members of the community are agents of a system that no one controls. Even the totality of the internal members of a corporation is not in control, simply because they are not organised to be so. There is no clear power centre, no core or hub of responsibility or autonomy, nowhere for the buck to stop. Shareholders, to repeat, typically have zero control on what the firm does on a daily basis. The directors have some day to day control, but are considered to be legally obliged to serve the profit interests of the shareholders.

In short, from a shareholder point of view, all doings, including harmful ones, are the responsibility of the directors, and in any case shareholders are not liable. From the directors' point of view, moral concerns cannot come into it, because their only (or primary) responsibilities are to seek profits to the advantage of the shareholders. This is the prevailing ideology. And under its influence the corporate juggernaut rolls on.

Rebecca Spencer (2004) of *Corporate Watch* is not far wrong when she summarises the situation as follows:

The vacuum at the heart of the corporation harnesses its managers' and employees' intelligence to aims which their consciences would otherwise abhor. Far from calling itself a human being, the corporation for all its power is a mindless predator, a super-brute, with a single, self-centred, self-expanding aim – to act in its own best interests (2004, p. 18)

Except that it is not really clear what are the corporation's "own best interests", apart from the received, if ultimately erroneous, consensus that in law at least this means doing whatever it takes, including transforming the whole global economic system, to better facilitate the pursuit of 'profit' in order to service the shareholder interest.

10.6 Final Comments and Conclusion

The corporation is a familiar feature of the modern world. The seemingly natural response to any of its workings by all other affected bodies is thus to seek out ways of accommodating and/or harnessing the corporate mechanism. It is to transform our relations to it, in a manner that seeks to advance the interests of us all; a form of relational steering.

I am suggesting that as things stand this may not be feasible. For whether or not the modern corporation is truly out of control, the huge degrees of freedom that result from its fundamental structure, means that, given the prevailing legal interpretations at least, it functions more like a badly designed mechanical device that warrants restructuring rather than something that *can* be harnessed.

At the core of the corporation and grounding the corporate mechanism is a process of social positioning that takes an unusual form. It is a process of positioning of a community (organised in the first instance to be constituted as an ordinary firm) to render it a legal person, legally separate from its various members, and the possessor of rights and obligations (originally intended only for human beings) that are irreducible to those of others. If the corporate mechanism is ever to be restrained or otherwise rendered more humanity friendly it is these underlying processes of positioning that likely need to be reassessed.

This requires however that we revisit questions which have been raised against the incorporated business firm throughout the last 400 years. What sorts of communities if any should be situated as incorporated companies via the legal fiction of the Legal Person in the form of the Juridical Person? If some business communities are to be so positioned what are to be the rights and obligations made available to them, and who is to decide? In particular is it possible in law to ensure that the corporation has no access to rights secured in bills of human rights; or to extend the financial and other liabilities of shareholders? And so on.

I do not doubt that any attempts to transform these basic structures, were they to emerge, would be met with the full force of corporate power. They would also be difficult to coordinate internationally. This in part is why the corporation currently faces only the very restricted attempts at regulation or relational steering noted earlier. But at the very least these matters warrant being systematically discussed. After all, the resulting situation, the nature of the modern corporation, was hardly an inevitable and uncontested outcome, and the stability of evolved structures at least ought to be intellectually challenged.

Alternatively, some mileage may be achieved from recognising that there is nothing in law that requires a corporation to prioritise shareholder interest including seeking the greatest profits. Such recognition in itself would resolve little of course. But if accompanied by a further recognition that the corporation is essentially a community, it may allow experimentation with the idea that all the latter's various members' interests might drive the company objectives. This would likely warrant a turn to something like the stakeholder conception of the firm, currently being urged in various quarters.²¹

Finally, if it proves to be the case that a relevant structural transformation of the modern corporation is all too difficult, whilst the prevailing ideology is overly obdurate, it may instead be possible to divert attention to the fact that the position of Legal Person includes not only that of Juridical Person but also Natural Person. The point of this would be to strengthen the powers of resistance of the human occupants of the latter, through acknowledging the latter's rights to conditions of flourishing, including a clean, safe and healthy environment, and adequate levels of health and safety at work. This would implicitly place obligations on the corporation not to violate these rights (just as rights of property for any given individual [e.g. home

²¹ For an interesting recent contribution of this sort, that advances a similar sort of conception of the firm to that advanced above, arguing that the company should be viewed as a commons, see Simon Deakin 2012.

ownership] entail implicit obligations on all others not to violate them). If the interests of living beings and corporations conflict, as seemingly they frequently would, there is a chance of the courts finding in favour of the former. A small suggestion and a highly speculative one, I know. I throw it in the hat not with any real conviction, but to indicate the level and sort of discussions that may be required if existing challenges are even to be meaningfully addressed. Meanwhile, I see no immediate prospect of preventing the juggernaut that is the corporation from lurching along in its always-potentially destructive, global transforming, if seemingly mindless way.

Acknowledgments I am very grateful to the *Independent Social Research Foundation* for funding the research on which this paper draws. I am also grateful to participants of the Morphogenic Workshop for helpful comments when I first presented a draft of this paper at its meeting in Oxford in January 2014, and to Margaret Archer for further comments on a revised draft.

References

- Bakan, J. (2004). *The corporation: The pathological pursuit of profit and power*. London: Constable and Robinson Ltd.
- Coase, R. H. (1937). The nature of the firm. *Economica*, 4(16), 386–405.
- Corton, D. C. (1995). *When corporations rule the world*. San Francisco: Berrett-Koehler with Kumarian Press.
- Deakin, S. (2012). The corporation as commons: Rethinking property rights, governance and sustainability in the business enterprise. *Queen's Law Journal*, 37(2), 339–381.
- Donati, P. (2013). Morphogenesis and social networks: Relational steering not mechanical feedback. In M. S. Archer (Ed.), *Social morphogenesis* (pp. 205–231). New York: Springer.
- Drutman, L., & Cray, C. (2004). *People's business: Controlling corporations and restoring democracy*. San Francisco: Berrett-Koehler.
- Griffin, S. (2006). *Company law – Fundamental principles* (4th ed.). Harlow/New York: Longman.
- Lawson, T. (1997). *Economics and Reality*. London/New York: Routledge.
- Lawson, T. (2012). Ontology and the study of social reality: Emergence, organisation, community, power, social relations, corporations, artefacts and money. *Cambridge Journal of Economics*, 36(2), 345–385.
- Lawson, T. (2013). Emergence, morphogenesis, causal reduction and downward causation. In M. S. Archer (Ed.), *Social morphogenesis* (pp. 61–84). New York: Springer.
- Lawson, T. (2014a). A speeding up of the rate of social change? Power, technology, resistance, globalisation and the good society. In M. S. Archer (Ed.), *Late modernity: Trajectories towards the morphogenetic society*. New York: Springer.
- Lawson, T. (2014b). Critical ethical naturalism: An orientation to ethics. In S. Pratten (Ed.), *Social ontology and economics*. London: Routledge.
- Micklethwait, J., & Wooldridge, A. (2003). *The company: A short history of a revolutionary idea*. New York: The Modern Library.
- Posner, R. A. (1972). *Economic analysis of law*. Boston: Little, Brown and Company.
- Spencer, R. (2004). Corporate laws and structures: Exposing the roots of the problem. In *Corporate watch*. Oxford: Green Print.

Chapter 11

Death Contested: Morphonecrosis and Conflicts of Interpretation

Ismael Al-Amoudi and John Latsis

This chapter lays the groundwork for a realist analysis of the disappearance or ‘death’ of social forms.¹ How social forms disappear is particularly relevant in societies experiencing intensified social transformation. Yet, whilst the notion of morphogenesis can account both for the acceleration of change and for the multiplication of coexisting social forms (Al-Amoudi 2014), it does not allow us, on its own, to theorise the disappearance of social entities.² Addressing this gap in the theory of morphogenesis opens interesting avenues for the philosophical study of society.

Indeed, in the absence of an established framework of analysis, figuring out whether a social form has in fact disappeared or survived can be difficult. For instance, is slavery dead or is it alive? Some African countries still practice forms of slavery that allow pious Muslims willing to perform a good deed to free slaves. Even in the USA, poor workers often work in conditions comparable to slavery. Think for instance of a single mother struggling with three part-time jobs. More subtly, but equally importantly, much of the West’s material prosperity rests on manufacturing practices in the East that many Westerners would find hard to justify.³ Similar ambiguities, we suggest, surround most cases of social transformation: lifelong jobs, marriage, attitudes towards authority and so on. As will be clarified below, every instance of social transformation begs a series of questions about

¹We use the term ‘social form’ following other realist authors. It incorporates narrower conceptions of social structure without being reducible to them.

²We are particularly grateful to Andrea Maccarini and Colin Wight who raised these issues at the January 2013 meeting of the Centre for Social Ontology.

³Our cars and our iPhones, but also our shoes and our shirts are often produced under conditions Western observers would not accept for their own children. See Banerjee (2008) for a general account of necrocapitalism. For an account of the culture of overwork in Asian corporations see Meek (2004).

I. Al-Amoudi (✉)
Cardiff Business School, University of Cardiff, Cardiff, UK

J. Latsis
Henley Business School, University of Reading, Reading, UK

which features of extant social forms disappear or survive in some vestigial form. It also opens up the possibility of studying the social processes that either contest or confirm the disappearance of any given social form.

This chapter attempts to fill a gap in the literature on social morphogenesis opened up by considering such questions about the ‘death’ of social forms. Our contribution is organised around three related questions:

1. How should we conceptualise the disappearance of social forms and can this conceptualisation draw upon the biological conception of death?
2. How do concept-dependence and reflexivity differentiate social death from biological death?
3. How can we observe and interpret the agonies that accompany the death of certain social forms?

We conclude by providing an illustration of how the theory might be applied to a case with significant current socio-economic ramifications: the disappearance of life-long employment in developed capitalist economies.

11.1 Conceptualising the Disappearance of Social Forms as ‘Death’

As we have already stated, our argument relies on the observation that social forms not only change over time, but can also disappear. For example, the Aztec institutions surrounding human sacrifice, which were prevalent in sixteenth century Central America, no longer exist. Indeed, social scientists and historians have often said that – just like the sacrificial victims themselves – these institutions have ‘died’. Talking of death in these contexts is obviously metaphorical and distinct from the biological use of the term, so why develop it further? This section seeks to justify the conceptual elaboration of the death of social forms and its use within realist social theory. Our argument proceeds by first demonstrating the continuity between a significant stream of social scientific research and the idea of the death of social forms: what we will henceforth refer to as *morphonecrosis*. We then turn to the biological conception of death to draw new connections between death in biology and social theory.

There is a long tradition within social theory, spanning from Karl Marx and Emile Durkheim through to John Maynard Keynes, Maurice Mandelbaum and Roy Bhaskar, which defends the view that social forms are ‘more than the sum of their parts’. Though this tradition is sometimes dismissed because it is said to be overly holistic, structuralist or even socially determinist, its contribution to the history of the social sciences is undeniable. In particular, this current of thought has articulated and defended four theoretical propositions that are crucial antecedents to our discussion of morphonecrosis:

1. Social forms have features (sometimes functional properties) that are irreducible to their constituent parts (humans, material objects, etc.).
2. Social forms can survive the renewal or change of those constituent parts.

3. Persons have features (mental or social properties) that are irreducible to their constituent parts (cells, neurons, etc.).
4. Persons can survive the renewal or change of those constituent parts.

Propositions 1–4 were originally presented as counter-arguments to classical individualism in its methodological, ontological and political guises (e.g. Mandelbaum 1955). However, their significance for our argument comes from the fact that they articulate the basic parallels between biological and social forms that individualists attempted to deny: both human beings and social forms are composite entities that have unique macroscopic features and survive changes in their constituent parts. The key difference between persons and social forms that comes out of this analysis is the fact that human beings are intentional agents whereas – in the absence of a group-mind theory, which we do not endorse – social forms are not. But the disappearance of intentional agency (or consciousness for that matter), though it is often a feature of human death, is not a sufficient condition for biological death in humans, or indeed in other organisms. Theoretical speculation built on these four propositions has led to the development of numerous ‘organicist’ social theories which insist on treating social forms as having relations and cycles of development that are qualitatively different from those that can be used to describe the behaviour of their constituent parts. Thus, both humans and social forms are conceived as historically finite: they appear and disappear in time. However, whilst the notion of death is accepted as a precise description of the end of a human life (for a critique, see Willmott 2001), the situation is less clear in the case of social forms.

What happens when a social form disappears? Social theory offers much less guidance on this question beyond noting (as we have already said) that they do indeed tend to degenerate over time and disappear. The biological sciences provide a more systematic account of the mechanisms underlying this type of disappearance as death. In biology, there are two distinct ways to conceptualise the death of a living thing. In the first case, *apoptosis*, a healthy tissue persists, but individual cells die. During apoptosis, dead cells fragment and are eliminated. The whole tissue, however, remains alive and the healthy cells will split to generate new cells. For example, the organs of a developing embryo are differentiated in this way and, in a healthy adult, between 50 and 70 billion cells die through apoptosis every day. Through apoptosis, the constituent entities (e.g. skin cells) die, but the biological organism (Sally) survives and her biological form is reproduced or transformed in accordance with what would be considered ‘normal’ development. The second case, *necrosis*, on the other hand, refers to a process of cell death through which the organism’s morphogenesis is disturbed. During necrosis, dead cell debris is not eliminated and may form necrotic tissues that impede morphogenesis. In cases of necrosis cells also die, but their death is soon followed by the death of the tissue and – unless the process is halted by some intervention – by the death of the organism as a whole. In this way, the ‘normal’ process of morphogenesis is disrupted and, eventually, stopped altogether.

As Archer (2013) remarked, every metaphor has its limitations, and biological metaphors are no exception for describing social processes. However, the distinction between necrosis and apoptosis is relevant as it attracts attention to the importance of distinguishing between levels of description when analysing the death of social forms.

Death at one level may (necrosis) or may not (apoptosis) bring death at another level. Hence, some cells might die in a mouse without the whole mouse dying. Conversely, the recent cadaver of a dead mouse may still carry some living cells, though the remaining living cells are deprived of the processes necessary for their longer-term survival. We will return to this feature of biological death when discussing the conditions associated with the death or survival of social forms in Sect. 11.3.

It should be noted that this distinction between levels of description has an ontological and an epistemic component. In ontological terms, biological forms can be distinguished by invoking their emergent properties and levels of organisation. Organisms are complexly structured composite entities with emergent properties and powers, such that each level of description may also pick out a real emergent level of organisation of the entity. To return to our earlier example: cells are organised into tissues, themselves organised into organs, themselves organised into living organisms, themselves organised into populations. To pronounce a biological form 'dead', one must refer to some specific emergent level of organisation and demonstrate that it has ceased to function or exist.

However, biologists also rely on systems of epistemic categories that are human linguistic constructions purporting to establish references to objects they are not creating ipso facto (Al-Amoudi and Willmott 2011). These systems of categories substitute a full, concrete account of reality with an abstraction that emphasises certain key characteristics of the entities under consideration. Thus, a biologist can utilise more or less abstract conceptions of a given entity, depending on her epistemic objectives. Individual mouse N12345 can be abstractly conceived of as a mouse with a certain chromosome, as a member of the genus *Mus*, or as a mammal. Each description is concept-dependant and related to the objectives of the enquirer. It is widely held that abstraction of this sort is a necessary part of theory construction in both the social and the natural sciences (Sayer 1981).⁴

Thus, the biological conception of death encompasses, on the one hand, locating the dead entity at a specific emergent level of organisation and, on the other hand, the epistemic dimension of identifying a given entity with a particular abstract category. It remains to be seen how this conception can be fruitfully extended to analysing the death of social forms, a question to which we now turn.

11.2 When Social Forms Die: Reflexivity and Concept-Dependency

Our discussion of the two key biological conceptions of death, apoptosis and necrosis, has revealed that any answer to the question, 'is x dead?' will depend crucially on the level of description at which the question is posed. Just as in the biological case,

⁴Needless to say concept dependence does not imply that the enquirer is always correct in their classification of an entity in a given class. Natural history is littered with examples of misattributions that were corrected after further study.

social forms are arranged into hierarchies composed of successive emergent levels of organisation, which usually reflect increasing size and complexity. Hence, in the economic realm, small teams of producers are typically thought to combine into departments, departments combine into firms, firms combine into industrial sectors, sectors combine into national economies and national economies combine into the global economy. We take this ontological feature of the social realm to be relatively unproblematic for our present purpose, though we recognise that the specific boundaries and systems of categories employed by social scientists will inevitably remain open to debate. Nevertheless, we can draw a parallel conclusion to the one drawn in the preceding section: to pronounce a social form 'dead', one must refer to some specific emergent level of organisation, and demonstrate that it has ceased to function or exist.

As in the biological case, the process of determining whether a social form is alive or dead remains concept-dependent since it necessarily reflects the categories employed by, and therefore the epistemic preoccupations of, the enquirer. This is not to say that concept-dependency is arbitrary: it is non-arbitrary in the sense that it is guided by observers' attempts to refer to mechanisms that explain the death or survival of entities. However, social forms can be described and classified in accordance with a number of different conceptual categories, depending on the question one is attempting to answer. The role of language and categorisation in introducing epistemic relativity is, as would be expected, at least as important in the social as in the biological realm.

However, it is at this stage that the first significant limitation of the biological metaphor arises. The differences between the biological and social conceptions of death should be straightforward to readers familiar with the realist tradition of social theorising. Social agents are characterised by reflexive powers, which, in the biological realm, are peculiar to human beings: human social agents can reflect on the worth of a social institution and on the benefits, inconveniences, or harm they derive from it. They can also, to some extent, figure out the consequences of maintaining or attempting to transform or suppress specific social forms. Furthermore, human agents' social interaction is mediated through language and the way in which they conceptualise any given social form bears on agents' transformative powers just as it bears on observers' abilities to qualify any given transformation as a superficial change or as the social entity's death. *In other words, the human social and linguistic activity that surrounds the description, categorisation and contestation of social forms has a direct causal impact on those very social forms.* It is obvious that the same cannot be said of biological apoptosis or necrosis. Describing cancer cells in animal tissue as 'healthy' or 'non-malignant' cannot causally affect the progress of a tumour or the prognosis for the biological subject.⁵

This key difference between social and biological death has far-reaching consequences for the development of an adequate conception of morphonecrosis, because it affirms the importance of the reflexive powers of agents in deciding the fate of social forms. Whilst we do not wish to suggest that individual agents, or even

⁵The case of human beings is arguably more complex as it can include psycho-somatic mechanisms.

collectivities, can necessarily or always *decide* whether a social form will survive or not, their actions and words have a causal impact on social processes which is not mirrored in the biological realm. Whilst apoptosis can (in some cases) be reversed and necrosis can be delayed by medical interventions, biological death is a natural and inevitable process that cannot be affected by interpretative activities.⁶ Social death, on the other hand, can be (and usually is) contested. The disappearance of a social form is an arena of conflict in which different conceptions of the social realm and their attendant taxonomies and social practices compete to shape future social arrangements.

11.3 Agony as a Social Contest: Morphonecrosis and Agonistic Processes

The term ‘agony’ (from the Greek *agon*: contest for a prize) can be used to describe the death throes of both biological and social forms. It connotes intense suffering, the last moments preceding death, and a competition or struggle.⁷ We argue that morphonecrosis is typically, though not always, accompanied by agony or what we might think of as a *social agonistic process*. This social agonistic process is a struggle to determine the fate of a social form in which reflexive agents participate, often consciously and deliberately, to preserve or despatch it.

Before articulating more precisely general features of agonistic processes, our use of the term requires some qualification. As we have already seen, the term ‘agony’ carries various connotations: a struggle preceding death, but also a fight and a contest for a prize. In particular, the word does not automatically denote situations of imminent or certain death. This is crucial in our view, because we do not espouse a deterministic account of morphonecrosis in which the results of all agonistic processes must be assumed to be social death. In our conception, social forms may well recover from an agonistic process. Moreover, whether they emerge stronger or

⁶The fact that biological death is unaffected by interpretative activities should not lead one to assume that such interpretative activities are absent from the medical, legal and broader social practices related to dying. Legal definitions of death can, for example, vary across jurisdictions and over time in the same jurisdiction (for example, those bodies expressly frozen whilst they ‘await a cure’).

⁷The Oxford English Dictionary proposes the following etymology of Agony: ‘Etymology: < (i) Anglo-Norman *agonye*, Anglo-Norman and Middle French *agonie* (French *agonie*) mental struggle, anguish, distress (1160 in Old French as *agoine*), death-agony, the throes of death (end of the thirteenth century in Anglo-Norman as *agone*), physical suffering, extreme pain (c1330), physical exertion or struggle (e.g. in battle) (second half of the fourteenth century), and its etymon (ii) post-classical Latin *agonia* mental struggle or anguish of Christ in the Garden of Gethsemane (Vetus Latina, Vulgate), anguish, distress (fourth century.), death-agony (from eleventh century in British and continental sources), tribulation, contest (from thirteenth century in British sources) < ancient Greek *ἀγωνία* contest, struggle for victory in the games, gymnastic exercise, mental struggle, anguish, in Hellenistic Greek with specific reference to Christ’s anguish in Gethsemane (New Testament: Luke 22:43) < *ἀγών* *agon* n. + *-ία* *-y* suffix.’

weaker than they first were depends on the situation's specific circumstances.⁸ What is specific about our conception of agonistic processes, however, is that death or survival depends on the interaction of socially situated actors holding differing concerns and vested interests (Archer 1995, Chap. 7).

We make the further assumption that actors tend to be interested in the defence of their vested interests. This interest is best expressed, in non-linear terms, as a tendency. It can be encouraged or inhibited by countervailing mechanisms of a social, cultural or personal nature. Thus, certain types of organisation can be less conducive than others to encouraging the defence of vested interests. One can think of the obvious restrictions imposed in dictatorial regimes or of the less obvious, but equally potent, restrictions imposed in companies that cultivate 'fun' and 'authenticity' (Fleming 2009). The cultural realm also plays a fundamental role in enabling or disabling the defence of vested interests. It does so by offering a stock of cultural entities (ideas, works of art, slogans, role models) that agents can mobilise in their struggles. Finally, the defence of vested interests can only be tendential because it depends on agents' personal reflexive powers (Archer 1995). Indeed, some people develop their ability to navigate through the social world, adapt to its transformations, question it, and change it purposefully (Archer 2012).

With these important qualifications in mind but out of the way, we turn to the analysis of social agonistic processes. To describe a social agonistic process as a competition or struggle for a prize begs at least two questions: (a) What are the prizes? (b) How are they contested? Below we provide a preliminary sketch of our answers to these two questions, which we shall deploy in the illustration that makes up the final part of the paper.

(a) Prizes

The agonies surrounding the death or rescue of social forms are intricately related to the benefits these forms generate for the people waging the struggles, or for the people they represent. To interpret these benefits as agonistic prizes is to stress that their value is relative both to the nature of the social form that generates them, but also to the outcome of the struggle. Should the struggle for the rescue of a social form fail, the attached prizes will be lost for participants.

Moreover, these benefits are causally related though ontologically and analytically distinct from the social forms that generate them. When studying the agonies of a social form, it is usually useful to distinguish the social form from the prizes participants expect from the struggle. The reasons why actors may wish

⁸The contemporary situation of French aristocracy can be interpreted as an example of a group that was devitalised but not entirely dissolved by the struggles waged against the social forms of monarchy. Through these struggles, the French aristocrats lost their monopoly over political decisions, their exemption from paying taxes, their exclusive right to possess land and so on. Their group was forced to cling to those few distinctive traits (social forms) that survived the revolution: their property rights over the château, their good manners and command of the French language, and the glamour they still inspire in narrow sections of the population (eg. readers of 'Almanac de Gotha' magazines).

to impede the death of a social form may vary in accordance with the prizes that they hope to reap from its survival. The list we provide below does not pretend to exhaustiveness and there may be other ways of categorising social agonistic prizes. However, we have found it useful to distinguish between economic, honorific, relational and moral goods.

1. *Economic capital*. The founding fathers of sociology, especially Marx and Weber, were particularly sensitive to the economic stakes at play in the defence or attack of social institutions. Marx, for instance, presents the classic model of a contest between social classes whose object is to determine the distribution of scarce economic goods or surplus resources of society. The demise of the landed aristocracy and the predicted demise of subsequent forms of bourgeois capitalism are explicitly analysed in these terms. An interesting account is provided in Archer (1995, Chap. 7) where she develops her notion of situational logics through the material provided by the classic analyses of Marx and Weber.
2. *Prestige*. The distinction between economic and honorific goods is central to any sociological account that purports to avoid economic reductionism. Landmark studies are offered in the works of Thorstein Veblen, Norbert Elias and Pierre Bourdieu and in the French *économie des conventions*. Although mechanisms of conversion between prestige and economic capital typically exist, conversion is seldom unmediated. We therefore subscribe to a categorical distinction between honorific benefits and economic ones. Norbert Elias (1983/1969) offers a striking account of families from the small nobility that would ruin themselves economically in order to secure prestige. The quarrel of the hats reported by Saint-Simon (1856, see also Bourdieu 1994; Al-Amoudi and Latsis 2014) offers a vivid example of a quarrel around the death of a social institution primarily guided by thirst for prestige.
3. *Relational goods* are defined by Donati as goods that must both be produced collectively and enjoyed collectively (Donati 2013). Archer complements the notion of relational goods with the converse notion of relational evils: evils that are produced and incurred collectively, think for instance of a sour, mutually degrading, marriage relationship. Many of the reasons for following conventions that we identified in a previous paper (Al-Amoudi and Latsis 2014) can be linked to relational goods. For instance: interdependency with other social forms, comfortable habits, ethnomethods and imitation offer a stable relational world (agony's prize) in which participants can make reasonable commitments and investments.
4. *Moral satisfaction*. The goods associated with the successful accomplishment of moral commitments include and exceed social stability as they also include moral satisfaction. Moral satisfaction constitutes a very common benefit in struggles over the life or death of social forms. Think, for instance, of the struggles surrounding the advent of gay marriage and the obverse death of the uniform Biblical (or Koranic) conception of marriage. While defenders of gay marriage view their struggle as helping the birth of a novel social form, the opponents to gay marriage view their struggle as a defence of the unitarian,

heterosexual, conception of marriage. In the latter's view, the unitarian conception of marriage is undergoing a morphonecrosis that they wish to halt or reverse. In this struggle, both parties are primarily motivated by moral interests, though they may also have economic, prestige and relational interests.

As Marx, Nietzsche and Weber pointed out, moral stakes are typically inter-connected with though distinct from economic or prestige stakes. More recent reflections, such as Porpora's chapter in the present volume, recast moral satisfaction at the centre of the political scene and, thus, recognise moral satisfaction as a prize in its own right.

We have endeavoured to clarify the generic prizes at stake in agonistic struggles without attempting to offer an exhaustive list. We now turn to the question of how agonistic struggles are waged for these prizes.

(b) Methods of contestation

What are the main methods of contestation employed by participants in the context of social agonies? It is arguably possible to categorise the methods of contestation in variety of ways. For simplicity's sake, however, we concentrate our analysis on three generic strategies.⁹ The first consists of changing the value of the goods generated by the agonising social form. The second consists of attacking or defending the institutions on which the survival of the agonising social form appears to depend. The third manoeuvre consists in reinscribing the social form in a different linguistic discourse.

1. *Valuing or devaluing the prize.* Social forms typically produce or are responsible for some form of prize or benefit which accrues to some portion of the population. The most common and straightforward way to undermine a given social form is to act in such a way as to reduce or disrupt the flow of the prizes or benefits it generates. Conversely, the simplest way to support it is to defend existing distributional arrangements. Extreme forms of this kind of struggle may involve increasing the costs of the targeted social form by bullying those people who benefit from it. Welfare reform in many Western countries can be seen in these terms: as extra conditions are placed on the distribution of welfare services, a series of bureaucratic hurdles must be overcome by welfare recipients in order to access resources that were once unproblematically available. In addition, the stigmatisation of welfare recipients delegitimises their claims on the state and justifies the further withdrawal of funding and services.
2. *Protecting or dismantling vital institutions.* An agonistic process relating to the disappearance of one social institution may often involve attacks on or support for other, related social institutions.¹⁰ This contestation targets institutions that are (or appear to be) vital, though distinct from, the agonising

⁹These are not mutually exclusive. Indeed, in many cases they could be seen as complementary.

¹⁰Institutional theory has provided extensive literature on this matter. Unfortunately, their insights typically privilege equilibrium over social conflict. Moreover, they downplay actors' agency by attributing transformative agency exclusively to 'institutional entrepreneurs'.

social form. For instance, if the benefit system of a welfare state relies upon (and has arisen in tandem with) a stable and progressive tax regime, then one obvious but indirect way to contest it is to change tax rates, or the ways in which they are levied.

3. *Reinscribing the social form in a different discourse.* The language associated with any particular social form is, as we have already said, crucial to its continued existence. The specific language used to describe a social form and articulate its functioning to those who experience it always has an evaluative as well as a descriptive function. Thus, merely re-describing an event or process can be a highly effective way of attempting to undermine or support a social institution that is threatened by agonistic processes. This is particularly obvious during agonistic processes in the political realm, where the sophisticated use of descriptive language can be crucial to determining the fate of a given social form.

It should be noted that, to yield performative effects, changes in language must entail more than mere neutral linguistic translation and must include discursive displacements as well. Neutral linguistic translation occurs, for instance, when a text is translated from a language (say English) into another (say French). Although a perfectly neutral translation is arguably impossible,¹¹ most linguistic translators endeavour to respect and convey the initial meaning through their translations. For instance, they would seek to produce a neutral translation by translating ‘internal rebellion’ by ‘rébellion interne’; ‘popular uprising’ by ‘soulèvement populaire’ and ‘armed insurgency’ by ‘insurrection armée’. However, the changes in language that interest us in the context of social agonies are those that reinscribe the social entity in a different discourse, thus emphasising some relations (conceptual or social) while downplaying others. Think for example of the different consequences for a state with an internal rebellion of describing it as a ‘popular uprising’, rather than an ‘armed insurgency’.

11.4 An Illustration: Lifelong Employment in Capitalist Economies

In this section, we illustrate our theoretical framework by applying it to a specific social form, namely, lifelong employment. We do so by first defining the level of description appropriate to observe the ongoing death of lifelong employment in developed economies. We then examine the various agonies that accompany and determine lifelong employment’s evolution over the past 50 years or so. The analysis of these agonies follows our framework closely. First we examine the de/valuation of the benefits generated by lifelong employment. Then we discuss the various attempts to protect or dismantle the institutions on which lifelong employment

¹¹ One thinks, for instance, of J-L Borges’s bold proposition that it is impossible to translate a poem.

depends. Finally, we follow how lifelong employment was reinscribed in a variety of discourses, and with what effect.

There is an established stream of research spanning economics, sociology and organisation studies that focuses on the historical transformation of employment relations in developed economies. We base our argument on the comprehensive overview provided by Kalleberg's (2011) *Good Jobs, bad jobs: the rise of polarized and precarious employment systems in the United States, 1970s–2000s*. A well-established finding of this stream of research is that the stability of employment relations is in long-term decline: workers tend to have more jobs during their working lives and they tend to change jobs more frequently than their counterparts did a generation ago. The advent of globalised trade, flexible labour markets, decline in union power, changes in productive technology and financialization amongst other factors are thought to have contributed to the virtual disappearance of what was once thought of as a 'job for life'. In our terms, the previously dominant social form of lifelong employment is thought to be in the midst of an agonistic process. In the remainder of this section, we will apply the theoretical lens developed above to analyse this process.

(a) Recognising and locating lifelong employment's death

To determine whether lifelong employment is dead or agonising, scholars must first locate the social scientific concept upon a descriptive continuum ranging from the abstract to the concrete. If the description is too abstract, lifelong employment will be indistinguishable from other forms of employment and thus its decline will be impossible to trace. If the description is too concrete (i.e. describing the contractual situation of an individual worker or even a specific specialised group), then the theoretical analysis risks triviality (due to the impossibility of generalising beyond the single observation). In the most abstract terms, employment relations involve an exchange of labour for money (or some close substitute) and a transfer of individual authority from the worker to the business owner or its representative(s). At this level of description, however, the difference between lifelong employment and a precarious temporary job cannot be articulated, so the literature justifiably focuses on something more concrete. A more concrete alternative for an empirically-based literature is to focus on the legal and contractual aspects of the employment relationship, such as the presence of a permanent rather than fixed-term contract between employer and employee. However this approach remains too abstract because, as all contributors to the field are aware, contracts cannot exhaustively describe the relationships to which they pertain. A more appropriate description includes the specific type of salaried relation with the mutual rights and obligations it encompasses. For instance, one can think of the lifelong employment relationship and the mutual obligations (and corresponding prerogatives) it entails: loyalty to the firm; reasonable assurance of keeping one's job as long as one works diligently and complies reasonably; assurance of a steady source of income. And as an emerging consequence: ability to make familial or financial commitments (e.g. starting a family or borrowing money to buy a house).

In the case of lifelong employment, traditional indicators such as unemployment figures and GDP per capita have been supplemented by a number of more detailed measures. Figures such as job tenure, hours worked, promotion, benefits, entitlements, etc. are all designed to tease out, in measurable terms, the 'quality' of work beyond the simple facts of contractual status and remuneration. Although Kalleberg argues convincingly that we currently lack longitudinal data over sufficiently long periods for these figures, the overall picture suggests that lifelong employment of a kind that was common in the mid-twentieth century (at least for white males in developed economies) is now dwindling in developed capitalist economies and that it has been replaced as the norm by an entirely different set of employment relations.

(b) Lifelong employment's agonies

Studying the agonistic process surrounding lifelong employment reveals struggles for each of the prizes identified above in Sect. 11.3: economic capital, prestige, relational goods and moral satisfaction. Moreover, the tactics mobilised in these struggles involve de/valuing the prizes associated with lifelong employment; protecting or dismantling institutions that fuel lifelong employment and, at the discursive level, attempting to reinscribe lifelong employment in several discourses.

1. *Devaluing the benefits of lifelong employment.* Economic capital is perhaps the most obvious and explicitly contested element at stake. As lifelong employment has dwindled, so Gini coefficients have risen and the real income of salaried employees in most developed economies has stagnated or declined. Highly skilled employees such as management consultants or merchant bankers managed to negotiate above average salaries in exchange for newly accrued uncertainty. But the struggles brought much less favourable outcomes, however, to low-skill employees who were put in competition with the workers of poorer countries and who had to undergo both cuts in real-terms of their revenues and accrued precariousness.

The *prestige* of holding a secure, permanent job, and the infamy of losing such a position were arguably attenuated by a debt-fuelled economy that emphasised the consumption of positional goods as a way of affirming one's worth. As we argue further below, tenure was discursively reinterpreted as a matter of exception rather than as a normal feature, while the infamy of 'being fired' gave way to the banality of 'losing one's job'.

Many of the *relational goods* associated with lifelong employment (or at least expectably long tenures) were also challenged during the 1970s–2000s period. The most obvious blow was brought by the deleterious working environments produced by massive organisational downsizing. In such situations, previously trusting and friendly colleagues are put into competition for those jobs remaining. Each employee must prove they are more worthy than their colleagues of remaining members of the work organisation. The situational logics of 'correction' or 'protection' are brutally replaced by one of 'elimination' or, at best, compromise. Even in the lucky cases when corporations would not be under direct downsizing pressure, another, less direct,

blow was also struck against the relational goods generated by lifelong jobs: as length of service in the firm became disregarded as a value in itself, so was the contribution of many older employees. The later were deemed to be less productive than their younger, and typically cheaper, colleagues. Gringart et al. (2005) summarise their study of the workplace stereotypes of older workers in these blunt words:

Older workers were viewed as being less adaptable to new technology, less interested in technological change and less trainable, as well as being less ambitious, less energetic, less healthy, less creative and not as physically strong. They were thought to have impaired memory, to be less mentally alert, and less flexible. Finally, older workers were considered inferior to younger workers in their likelihood to be promoted. (Gringart et al. 2005: 96)

The *moral satisfaction* derived from holding or defending lifelong jobs was arguably maintained on the whole, although it also became more ambiguous. On one hand, lifelong jobs, such as those traditionally offered to public sector functionaries, were reinterpreted as unfair privileges held by advantaged groups. On the other hand, the responsibility for losing one's job, was partly though significantly attributed to individuals failing to meet stringent market requirements or performance criteria defined by bureaucratic managers.

While a study of the struggles surrounding the structural effects of lifelong employment is arguably an important part of the explanation of its death, our emergentist ontological framework also encourages us to attend to the structural causes of declining lifelong employment. We now turn to this task.

2. *Protecting/dismantling institutions that fuel or foil lifelong employment.* Kalleberg (2011) argues that the 'precarisation' of employment is more convincingly explained in terms of the erosion of workers unions in the US and other developed economies than in terms of a decline in productive systems' profitability or productivity. Indeed, while corporate productivity nearly doubled over the 1970–2009 period (Kalleberg 2011, Fig. 2.3) the median hourly compensation increased in real terms by only 30 % for all workers. Moreover, the median compensation for male workers, those traditionally benefiting from lifelong jobs, was in 2009 at a similar level to 1973. Over the same period, the number of employees quitting their jobs voluntarily increased, the perception of job security fell sharply, firms' internal markets weakened and average tenure declined for men (though it increased for women).

Kalleberg identifies a number of 'macro structural forces' explaining the degradation of labour conditions in the US: a sharp decline in unionization; changes in the legal environment that weaken unions; systematic attempts by corporations to discourage unionisation; the advent of information technologies which effectively removed several layers of middle management and to outsourcing production to countries with weaker social rights; strategic choices emphasising low production costs over high product quality, the inclusion of immigrants willing to work for lower wages, and so on.

What Kalleberg does not study in depth, however, are the various struggles that surrounded the institutional changes above. Yet, without a specific study of these struggles, the reader is left with the impression of deterministic impersonal macro structural forces moving the economy. The framework we present in this paper does not, on its own, provide us with full responses that make further detailed empirical analysis unnecessary, but at least it allows us to ask a few missing questions: what succession of struggles led to the demise of unions in the US?¹² Through which legal battles were employers granted the powers to degrade job security while continuing to generate substantial profits? Which groups attempted, and ultimately failed, to defend high quality rather than low cost strategies? What were the contentions surrounding the erosion of internal labour markets and their replacement with external hiring procedures?

Such questions seek to revive the forgotten memories of the agonies of the institutions that were legally and economically vital to lifelong employment. Yet, it may also be worth asking similar questions regarding those institutions nourishing lifelong jobs' prestige,¹³ the relational goods they are able to generate¹⁴ and the moral satisfactions that holders and defenders can derive from them.

So far, we have addressed the struggles affecting the value of lifelong employment and the viability of those institutions vital for its survival. On a few occasions, for instance when discussing the prestige and moral satisfaction of lifelong jobs (see section b.1. above), we have hinted at discursive displacements. There is, however, more to say about these discursive displacements.

3. *Reinscribing lifelong employment in different discourses.* The notion of lifelong employment has undergone a series of discursive shifts since the 1970s. These shifts were of consequence for the economic expectations associated with lifelong employment, but also for the prestige, relational goods and moral satisfactions previously derived from it. In this subsection, we review briefly those discursive shifts which seem of particular significance in accounting for the morphonecrosis of lifelong employment and stable employment tenure.

Firstly, the traditional model associating the economic revenues of the household with the stable income of the pater familias, still largely prevalent in the 1970s, has been replaced with the expectation that households would benefit from two salaries. While this shift in expectations was arguably a positive evolution for those women wishing to enjoy the greater autonomy offered by an independent source of income, it was concomitant with the decline in the individual salaries and job stability of male workers. Our paper does not seek to prove a

¹²One thinks for instance of the 1981 traffic controllers strike that was declared illegal by President Reagan thus paving the way to further attacks on unions' basic rights (Mc Cartin 2011).

¹³It may be conjectured that the investment in and development of corporate culture in the 1980s and the ensuing glamorization of such values as 'autonomy' has contributed to eroding the moral satisfaction and prestige associated with collective action. See for instance Willmott (1993).

¹⁴The substitution of family ownership by market ownership might account partially for the rise of employment insecurity. For arguments relating job stability and family ownership, see for instance James (1999) and Bassanini et al. (2013).

simplistic relation of causality between the generalisation and normalisation of female employment and the degradation of men's working conditions. However, it may be conjectured that the generalisation of two-income households has contributed to maintaining the impression that growth was fairly redistributed to working families, an impression that is defensible in terms of overall household revenues though not in terms of wages per hour worked. Moreover, the two-salary household model masks a number of costs incurred by families in which both husband and wife engage in full-time employment: economic costs such as nursing and transportation costs but also, one may venture, non-economic costs such as reduced family sizes and increased divorce rates.

More worrying, perhaps, is the generalisation of the idea that 'any job is a good job', thus leading to the abolishment of the popular distinction between 'good jobs' and 'bad jobs'. As Kalleberg puts it:

Understandings of job quality differ in part according to the opportunities that are available for the attainment of various kinds of job rewards. Workers are likely to calibrate their standards of what constitutes a good or bad job based on economic conditions. During economic downturns, for example, workers are likely to be happy to have a job at all (even a "survival" job) as opposed to suffering through long-term spells of unemployment. During the Great Depression, for example, a good job was one that provided enough money to live on. Moreover, during the Great Recession of 2007 to 2009, standards for evaluating a job as good were also likely based on whether the job provided decent wages and health insurance. According to Jean Eisen, a person in Southern California who lost her job selling beauty salon equipment two years prior to being interviewed in 2010, "There are no bad jobs now. Any job is a good job." By contrast, in the relatively affluent decades of the 1960s and early 1970s, the standards for evaluating a job as good might have been raised to one that provided meaningful and interesting work that enabled persons to "self-actualize" or to "be all that they could be." (Kalleberg 2011: Kindle locations 431–441).

This discursive shift, we would add, is not politically neutral as it undermines workers' ability to mobilise collectively in favour of better employment conditions.

Thirdly, we indicated above that 'tenure' has been reinterpreted as an exceptional privilege rather than a normal expectation for most categories of workers. This conceptual redefinition was complemented with a shift of policy makers' focus from lifelong employment to *lifelong employability*. The relatively novel concept of employability (McQuaid and Lindsay 2005; Peck and Theodore 2000) assumes discontinuous careers, marked by lay-offs and changes of employment status. Its critics argue, convincingly in our view, that it individualises the responsibility for avoiding unemployment whilst shifting the onus of securing employment away from collective action or corporate strategies.

Fourthly and finally, the responsibility of management and employers towards employees' well-being has also undergone significant redefinition. The financialisation of management practices and the widespread development of shareholder-value programmes in large corporations shifted the attention and responsibility of management towards financial returns that are typically evaluated in the short term and are eminently quantifiable if ultimately unpredictable. By doing so, managerial attention and responsibility has been turned away from, typically longer term and less easily quantifiable, production management and social

stability (Froud et al. 2000). The resulting redefinition of management's role has led, in turn, to a redefinition of the corporation as a reliable source of well-being for its employees. Although many corporations sought (in the 1990s and 2000s) to develop corporate cultures based on 'fun', 'authenticity' and 'employee development', these attempts seldom overcome the scepticism of employees or resist the inquisitiveness of researchers. Indeed, Cederstrom and Fleming (2012) argue that job-related anxieties permeate most employees' lives well-beyond conventional working hours, whilst Fleming (2009) and Gabriel (2012) demonstrate that corporate attempts to deny the precariousness of their employees usually end up with intensified feelings of insecurity.

11.5 Conclusion

Social death, just as biological death, refers to the end of an entity's existence. In both biological and social realms, entities are composite entities with emergent levels of organisation, and death at one level does not always imply death at another level. For this reason, it is key to locate the entity whose death is being examined. In the biological realm, death is typically (though not necessarily) located at the level of a cell, a tissue, an individual, or a species. And similarly in the social realm, death may be located at a relatively specific organisational level – such as a single organisation or community – or at a wider level – such as a whole economic sector or a nation-state. While death at one level is analytically independent from death at another level, in both biological and sociological cases an entity does not survive long once its material means of life are suppressed. Hence, dead mice's living cells and bankrupt universities' tenured lectureships are short-lived. Another parallel between biological and social entities is that we refer to their existence (and death) through the use of more or less abstract categories (e.g. 'seniority' has fallen into disuse). Every act of reference implies a necessary act of omission or suppression, yet it is these omissions that grant concepts the power to refer to multiple individual entities. Finally, in both the biological and the social spheres, births and deaths are surrounded by struggles.

The parallels between biology and sociology stop here, however. In the social realm actors are reflexive and agonies are purposive (although they often yield unintended consequences). Our approach allows us to clarify statements about the death of a given social entity. Which aspects are dead and which are not? And at which level of organisation is it dead and in which is it still alive or struggling? It also allows us to account for the stakes and manoeuvres involved in agonistic processes. Agony's prizes can be of several kinds: economic, honorific, moral or psychological. Differently situated actors defend or attack given social forms by nurturing or by drying-up the benefits the latter can offer to their users and members. Coalitions and reconfigurations of organisations may also influence the death or survival of those social entities over whose existence the struggle is waged. Labour protests, political

promises and compromises can be viewed as manoeuvres of this kind. And so is the creation or dissolution of Trade-Unions or lobbies. Through these discursive struggles, actors attempt to dis/credit or de/legitimise claims and arguments.

In spite of the myriad struggles threatening or defending social forms, history is usually written by the victors and social agonies are promptly forgotten. In their stead, we are left with seemingly irrefutable claims that whatever came to pass was 'inevitable'.

References

- Al-Amoudi, I. (2014). Morphogenesis and normativity. Problems the former creates for the latter. In M. S. Archer (Ed.), *Late modernity* (pp. 193–219). Cham/London: Springer.
- Al-Amoudi, I., & Latsis, J. S. (2014). The arbitrariness and normativity of social conventions. *British Journal of Sociology*. doi:[10.1111/1468-4446.12042](https://doi.org/10.1111/1468-4446.12042).
- Al-Amoudi, I., & Willmott, H. C. (2011). Where constructionism and critical realism converge: Interrogating the domain of epistemological relativism. *Organization Studies*, *32*(1), 27–46.
- Archer, M. S. (1995). *Realist social theory: The morphogenetic approach*. Cambridge: Cambridge University Press.
- Archer, M. S. (2012). *The reflexive imperative in late modernity*. Cambridge: Cambridge University Press.
- Archer, M. S. (2013). Morphogenic society: self-government and self-organization as misleading metaphors. In M. S. Archer (Ed.), *Social morphogenesis*. Dordrecht/London: Springer.
- Banerjee, S. B. (2008). Necrocapitalism. *Organization Studies*, *29*(12), 1541–1563.
- Bassanini, A., Breda, T., Caroli, E., & Reberioux, A. (2013). Working in family firms: Paid less but more secure? Evidence from French matched employer-employee data. *ILR Review*, *66*(2), 433–466.
- Bourdieu, P. (1994). *Raisons pratiques: Sur la theorie de l'action*. Paris: Editions du Seuil.
- Cederstrom, C., & Fleming, P. (2012). *Dead man working*. Alresford: Zero Books.
- Donati, P. (2013). Morphogenesis and relational networks: Relational steering not mechanical feedback. In M. S. Archer (Ed.), *Social morphogenesis*. Dordrecht/London: Springer.
- Elias, N. (1983/1969). *The court society*. New York: Pantheon Books.
- Fleming, P. (2009). *Authenticity and the cultural politics of work: New forms of informal control*. Oxford: Oxford University Press.
- Froud, J., Haslam, C., Johal, S., & Williams, K. (2000). Shareholder value and financialization: Consultancy promises, management moves. *Economy & Society*, *29*(1), 80–110.
- Gabriel, Y. (2012). Organizations in a state of darkness: Towards a theory of organizational miasma. *Organization Studies*, *33*(9), 1137–1152.
- Gringart, E., Helmes, E., & Speelman, C. (2005). Exploring attitudes toward older workers among Australian employers: An empirical study. *Journal of Aging and Social Policy*, *17*, 85–103.
- James, H. S. (1999). Owner as manager, extended horizons and the family firm. *International Journal of the Economics of Business*, *6*(1), 41–55.
- Kalleberg, A. L. (2011). *Good jobs, bad jobs: The rise of polarized and precarious employment systems in the US, 1970s to 2000s*. New York: American Sociological Association/Russell Sage Foundation.
- Mandelbaum, M. (1955). Societal facts. *The British Journal of Sociology*, *6*(4), 305–317.
- McCartin, J. A. (2011). *Collision course. Ronald Reagan, the air traffic controllers, and the strike that changed America*. Oxford: Oxford University Press.
- McQuaid, R. W., & Lindsay, C. (2005). The concept of employability. *Urban Studies*, *42*(2), 197–219.

- Meek, C. B. (2004). The dark side of Japanese management in the 1990s. *Journal of Managerial Psychology*, 19(3), 312–331.
- Peck, J., & Theodore, N. (2000). Beyond ‘employability’. *Cambridge Journal of Economics*, 24(6), 729–749.
- Saint-Simon. (1856). *Mémoires*. Available on <http://rouvroy.medusis.com/infos/tomes.html>. Accessed 10 Mar 2011.
- Sayer, A. (1981). Abstraction: A realist interpretation. *Radical Philosophy*, 28(2), 6–15.
- Willmott, H. (1993). Strength is ignorance; slavery is freedom: managing culture in modern organizations. *Journal of Management Studies*, 30(4), 515–552.
- Willmott, H. (2001). Death. So what? Sociology, sequestration and emancipation. *The Sociological Review*, 48(4), 649–665.