Valid Construals and/or Correct Readings? On the Symptomatology of Crises
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To Posit or Not to Posit Crises?

The Chinese ideogram for crisis combines two characters: *danger* and *opportunity*. This indicates the duality of crisis and suggests several important issues for current and future analyses of crisis, crisis construals, and crisis lessons. First, the ideogram signifies that crises have both objective and subjective aspects corresponding to danger and opportunity respectively. Building on Régis Debray, we can say that, objectively, crises occur when a set of social relations (including their ties to the natural world) cannot be reproduced (cannot "go on") in the old way. Subjectively, crises tend to disrupt (even "shock") accepted views of the world and create uncertainty on how to "go on" within it. For they threaten established views, practices, institutions, and social relations calling into question theoretical and policy paradigms as well as everyday personal and organizational routines. Second, in this sense, crises do not have predetermined outcomes: how they are resolved, if at all, depends on the actions taken in response to them. They are potentially path-shaping moments with performative effects that are mediated through the shifting balance of forces competing to influence crisis construal, crisis-management, crisis outcomes, and possible lessons to be drawn from crisis. Third, without the objective moment, we have, at worst, deliberately exaggerated or even manufactured "crises", at best, unwarranted panic based on mis-perception or mis-recognition of real world events and processes.[1] Sometimes, crises may be manufactured or, at least exaggerated, for strategic or tactical purposes not directly related to immediate events or processes. Agents may, for "political" motives, broadly interpreted, conjure crises from nowhere or exaggerate the breadth, depth, and threat of an actual crisis (Mirowski, 2013). After all, "one should never let a serious crisis go to waste" (cf. Rahm Emanuel's comment, made on the Bloomberg television channel in November 2008 in his capacity as transition manager for President-elect Barack Obama).[2] A rigorous analysis of crises, crisis construals, and crisis-management must be able to distinguish these alternatives or it could fall into a simplistic form of constructivism. Fourth, without the subjective moment, while disinterested *observers* may perceive a crisis developing either in real time or after the "event", the crisis will have insufficient resonance for relevant *participants* to spur them into efforts to take decisive action. Yet the notion of critical moment and turning point is a key feature of crises as conventionally understood. Fifth, from this perspective, then, crises are

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complex, objectively overdetermined moments of subjective indeterminacy, where decisive action can make a major difference to the future (Debray, 1973, p. 113; see also pp. 99-100, 104-105).

However, cautioning against too easy an adoption of this kind of perspective, Janet Roitman (2014, p. 41) notes that, while positing a given situation as a crisis makes certain questions possible, it also forecloses other kinds of question and lines of investigation. In other words, an over-reliance by participants or observers on interpreting specific symptoms as evidence of a continuing crisis or yet another crisis can create a blind spot that side-lines alternative descriptions, diagnoses, prognoses, and potential courses of action. Taking crisis *for granted* as a starting point means that the nature of crisis as an explanandum is left unexamined and therefore directs attention to the search for the best explanation (or, at least, some explanation). So, rather than asking whether X (an event or process) does or does not constitute a crisis, its unquestioned, unreflective treatment as a crisis, of whatever kind, short-circuits analysis of the crisis and, hence, decision-making about suitable responses. Although Roitman directs her criticism against historical narratives shaped by the interpretive couplet of crisis-critique that is allegedly characteristic of modernity since the eighteenth century (cf. Koselleck, 1988; Festl, Grosser, and Thomä, 2018), her arguments are also very apt for the inflation of crisis diagnoses and discourses in recent decades as mentioned in Chapter 1.

Indeed, the more that crisis discourse expands, the greater the risk that crisis becomes an empty concept. This is especially true where crisis is employed counter-intuitively, as is often the case nowadays, to describe an *enduring condition* rather than, as implied in its original meaning, to identify a *moment for decisive action* that might restore the *status quo ante* or lead to more or less radical social transformation. This risk can be remedied on condition that the durability of crises is related to *contingent* conditions that block a resolution that might otherwise occur. This is compatible with the general principles of critical realism and is analysed by Gramsci, for example, in terms of a "catastrophic equilibrium of forces" (1971: 219-23, 300; cf. Gramsci 1975: Q13, §27; Q14, §23; Q22, §10; for a discussion in relation to the crisis in Europe, see Keucheyan and Durand, 2015). These contingencies are illustrated in Chapter 4, where Andrew Gamble refers to the impasse of the British state or economy, which he regards as structural and deep-seated, leading to inertia, deadlocks or catastrophic equilibria. Likewise, Will Hout notes the permanent crisis in development assistance and explains this in terms of a failure to look beyond symptoms to deeper causes of poverty, inequality, and unsustainable

development. In a different context, more related to crisis construals than the objective overdetermination of crisis, enduring crises are especially likely where repeated critiques serve as substitutes for transformative action, which is an obvious temptation of intellectuals, and can lead to fatalism, cynicism, or stoicism (cf. Thomä, Festl, and Grosser, 2015, p. 17; Hindrichs, 2015).

In contrast, writing some four decades earlier than Janet Roitman, Edgar Morin (1993 [1976]) advanced a transcendental argument about crises as an appropriate theoretical object for a full-fledged "crisiology" (in French, *crisologie*), i.e., a *sui generis* theory of crisis. Whereas Roitman disputes the validity of crisis as an object of knowledge, Morin insists it can be. But this requires the crisiologist to locate crises in a precise theoretical framework in order to develop a general theory of crisis and corresponding praxis of crisis management.

> If one wants to move beyond conceiving crisis as perturbation, test, rupture in equilibrium, it is necessary to conceive society as a system capable of having crises, i.e., to pose three orders of principles, the first systemic, the second cybernetic, the third negative-entropy, without which the theory of society is inadequate and the notion of crisis inconceivable (Morin, 1976, p. 149, my translation; cf. 1993, p. 142).

In this respect, Morin's complements Roitman's critique of the naturalization of crisis. He insists that to talk of crisis entails quite specific theoretical and real-world conditions. This can be related to the distinction noted in Chapter 1 between crises as "accidental" events (which can also be described as "disasters") and crises as systemically generated events or processes based on specific structural contradictions, vulnerabilities, and crisis-tendencies. Both perspectives reviewed above are pertinent to a critical crisiology. For, whereas Roitman cautions against *unreflective categorization and explanation* of surprising or anomalous events and processes as "crises", Morin aims to specify the conditions in which it would be *theoretically appropriate* to categorize them as crises and seek to explain them as such. However, as we shall see, it is one thing to posit the abstract possibility of particular types of crisis or even the abstract possibility of a general crisiology; it is another thing entirely to explain the concrete form, substantive features, location, timing, and so forth, of specific crises.

This said, assuming that it makes sense to posit crisis as a valid object of inquiry in certain circumstances, one must recognize that crisis is a polysemic *word* and a problematic *concept*.

It denotes multi-faceted phenomena that invite analysis from different entry-points and standpoints. Hence, the theoretical significance of crisis depends on how it is articulated into a broader set of (preferably commensurable) concepts and on the sort of meta-theoretical framework in which the concept is embedded. Karim Knio explored the issue of the theoretical compatibility of different sets of concepts in Chapter 2. For example, constructivist accounts emphasize the constitutive role of discourse in identifying and shaping responses to crisis. Empiricist accounts analyse crises in terms of superficial features based on obvious external feature of crises, such as their sectoral, regional, financial, fiscal character, their intensity or duration or on statistical differences (e.g., crises with V-shaped, W-shaped, or L-shaped recoveries, i.e., a sharp drop and quick recovery, double-dip crises, and secular stagnation respectively.[3] This approach is then used to generate taxonomies, produce empirical generalizations about different taxa, or even to develop invariant laws of cause and effect. Another approach can be described, in critical realist terms, as "actualist". This tends to associate particular (sets of) symptoms with particular (sets of) causes. In the case of economic crises, for example, these causes might be irrational exuberance, excessive state interference with market forces, Minsky's financial instability hypothesis, the real business cycle, etc. In contrast with critical realism, then, actualism starts from crisis symptoms and moves directly to explain them in terms of corresponding prior sequences of events or causal processes. This is often associated with a chronological narrative approach or simplistic cause-effect analyses. In contrast, critical realist analyses start from symptoms and then inquire systematically into potential underlying real causal mechanisms, complete with their respective tendencies and counter-tendencies, and ask how these interacted in specific initial conditions to generate these particular symptoms as their contingently necessary outcome (see Sayer, 1992).

Once more: Crisis, what crisis?

Critical realism is an appropriate meta-theoretical framework for analysing the objective overdetermination of crises as events or processes. But it does not provide the specific conceptual and theoretical tools for exploring specific cases of crisis (cf. the argument in Jessop, 2015). For there is no crisis in general or general crisis: only particular crises of particular sets of social relations and, perhaps, the totality of crises in a given conjuncture. This requires specific critical realist theoretical frameworks with corresponding substantive concepts rather than a general invocation of the virtues of critical realism in general vis-à-vis alternative metatheoretical approaches.

Crisis is also an inherently *temporal concept* with spatial connotations. The concept implies that time unfolds *unevenly*, with continuities and discontinuities, transition points and ruptures, with scope for irreversible change rather than simple iteration, hence scope for path-shaping alongside path-dependence. "[T]ime moves faster in periods of crisis, and stagnates in times of regression" (Debray, 1973, p. 90). This indicates an important uncertainty in the crisis concept: is it a *single event* (and, if so, how would one identify its beginning and its conclusion), a *contingent series of events distributed in time and space* that are connected, if at all, because of earlier crisis responses that could have taken a different turn with different effects, or a series of events with an underlying tendential logic that therefore unfold as *a relatively predictable process* (if only from the perspective of informed observers)?[4]

A crisis is never a purely objective, extra-semiotic event or process that automatically produces a definite response or outcome. Crises do not generate their own resolution, even where trusted crisis-management routines exist; on the contrary, crises *of* given sets of social relations, especially where form-determined, often need relatively long, discursively, institutionally, technologically (in a Foucauldian sense), and agentially mediated search processes before a new, relatively durable order based on new institutional and spatio-temporal fixes allows movement beyond such a crisis. Without subjective indeterminacy, there is no crisis – merely chaos, disaster, or catastrophe and, perhaps, fatalism or stoicism in the face of the inevitable. In this sense, crises are a potential moment of decisive intervention, where, rather than muddling through, resolute action may repair broken social relations, promote piecemeal adaptation, or produce radical transformation.

In the light of these remarks, it is useful to classify crises on two dimensions (cf. chapter 1). The first concerns their aetiology. On the one hand, some crises appear "accidental", that is, are readily (if sometimes inappropriately) attributable to natural or "external" forces (for example, a volcanic eruption, tsunami, crop failure, invasion). When these have significant effects, they may be termed "*disasters*" (Quarantelli, 1988). This distinguishes them from crises that are rooted in crisis-tendencies or antagonisms grounded in specific structural forms (for example, profit-oriented, market-mediated capital accumulation). In other words, they result from the inherent crisis potentials and crisis tendencies of a given social form and may have corresponding patterns of crisis-management. This may require attention to systemic contradictions, structurally grounded antagonisms, and social conflicts without assuming that

every crisis derives therefrom. This distinction does not imply that accidental crises lack causes – just that these are so varied, individually or in their interaction, that they are harder to recover in a systematic manner. This said, external, coincidental, incidental causes may trigger structural or systemic crises by working "through the intermediary of the internal, structural, essential causes that constitute the determining element in society's crises" (Debray, 1973, pp. 101-2). In this regard, they would not be accidental because they have a primary causal mechanism that is expressed in very diverse ways. This poses interesting empirical challenges to identify this mechanism amid a wide and disparate range of circumstantial factors.

The second dimension concerns the significance of crises in terms of their potential impact on the simple or expanded reproduction of the relevant "order" or "system", including its typical modes of reproduction, its conditions of existence, and its relative embedding in a wider social formation. Such reproduction in the social world depends on the reproduction of the social relations that support the relevant "order" or "system" – relations that can be contradictory, conflictual, or antagonistic (the capitalist mode of production is an obvious example). On the one hand, crises "*in*" are normal (expected). They occur within the parameters of a given natural environment and/or set of social arrangements. There are also well-developed routines for dealing with accidental crises, reducing subjective indeterminacy. These are reflected and systematized in a large practical literature on how to respond to accidents and emergencies, whether these be natural disasters, large-scale accidents, or reputational damage to companies, organizations, and governments (Farazmand, 2001). Indeed, repeated observation of "normal" disasters, accidents, and crises, leaning *about* and *from* recurrent crises may encourage monitoring, risk management, disaster education and preparedness, rehabilitation, and the sharing of best practice (Kirschenbaum, 2004; Pinkowski, 2008) such that subjective indeterminacy is reduced. This could mean that crisis-management has become so routinized that a 'crisis' no longer exists even when objective crisis symptoms are present because there is no subjective moment since the symptoms merely trigger a "here we go again" response. Instead the basic features of disturbed arrangements are routinely restored through internal adjustments and/or shift crisis effects into the future, elsewhere, or onto marginal and vulnerable groups. This is exemplified in alternating phases of unemployment and inflation in the post-war advanced capitalist economies and their treatment through countercyclical economic policies.[5]

Crises "*of*" are less common. They occur when there is a crisis of crisis-management (that is, normal responses no longer work) and efforts to defer or displace crises encounter growing resistance. Crisis of crisis-management is a term introduced by Claus Offe (1984). He did so to denote potential second-order effects of established economic crisis-management routines, manifested in the displacement of crisis tendencies from the economic into extra-economic spheres (e.g., fiscal crisis, administrative crisis). Similar ideas are found in Habermas (1975) regarding rationality, legitimation and motivational crises. This displacement implies that crisis-tendencies remain incompressible but have different forms of appearance linked to different institutional and spatio-temporal fixes and to different crisis-management routines. This is a heuristically insightful notion and deserves broader use in deal with crisis dynamics. For example, an additional factor in crises of crisis-management is shifts in the balance of forces that may intensify crisis-tendencies by weakening or resisting established modes of crisis-management.

One reason that crises of crisis-management occur is that crises are overdetermined, i.e., they result from the interaction of different crisis-tendencies in complex conjunctures, so no crisis in all its complex overdetermination is ever self-identical with previous actualizations of the same crisis-tendency. Thus crisis-management routines that worked in the past may no longer be effective in different circumstances. For, whatever the universal features of crisis-tendencies in any given system (e.g., the capitalist mode of production), the particular features of any particular set of crisis-tendencies associated with a particular type of crisis (e.g., overproduction, underconsumption, disproportions, tendency of the rate of profit to fall, credit crisis, fiscal crisis, sovereign debt crisis), no algorithm, even if based on learning in, about, and from crisis, would be cognitively inadequate in the face of the *singularity* of the crisis, which, therefore, remains subjectively indeterminate.

Crises of crisis-management are more disorienting than crises "in" specific structures or systems, indicating the breakdown of previous regularities and an inability to "go on managing crises in the old way". In certain regards, one might consider these as crises in/of crisis-management. The prepositional ambivalence of "in/of" reflects the prospective as opposed to retroductive character of crisis construal, with the latter more suited to scientific analysis, the former more dependent on speculative bets about the future and, *a fortiori*, whether crisis-management routines are irretrievably broken or open to piecemeal reform. This reflects the open nature of social systems and the scope for human agency (as well as the non-linear

interaction of non-agential causal mechanisms) to make a difference to the future. This opens space for strategic interventions to significantly redirect the course of events rather than "muddling through" until the crisis is eventually resolved or hoping that the "business as usual" can be restored through emergency measures (see below). This poses a whole series of counterfactual epistemological problems about crisis construal and the asymmetry, emphasized in critical realism, between explanation and prediction. More generally, crises of crisis management can cause social stasis or regression, attempts to restore the old system by *force majeure*, fraud, or corruption; efforts at more radical social innovation for good or ill, leading in some cases to temporary states of emergency or more enduring exceptional regimes (for example, military dictatorship, fascism), or to efforts to break the power of such regimes.

This classification could be misleading if it were to one-sidedly highlight the objective aspect of crisis. A crisis is never a purely objective, extra-semiotic event or process that automatically produces a definite response or outcome. The objective moment of crisis becomes socially and historically relevant through the moment of subjective indeterminacy. This denotes the absence of an algorithm that unambiguously identifies the correct response to the crisis on the basis of its objective features, i.e., the absence of a self-evident way to restore simple or expanded reproduction or to move smoothly to another stable "order" or "system". The subjectively indeterminate response set includes non-decision or non-intervention – which, given the objective nature of crisis, also has system-relevant effects and is therefore a mode of decision and intervention. Ideas and imaginaries[6] shape the interpretation. A rigorous analysis of crises, crisis construals, and crisis-management must be able to distinguish these alternatives or fall into a simplistic form of constructivism.

The importance of subjective indeterminacy also poses the question of the resonance of crisis construals and responses, on the one hand, and, on the other hand, their material adequacy to the objective character of the crisis, multiple crises, or interaction among different kinds of crisis. This is a source of massive practical as well as theoretical problems in analysing and managing crises. A crisis is also a moment for contestation and struggle to construe it and inform individual and collective responses. Interpretations can range from denial ("nothing to see here") through claims of a major break ("tipping" or "turning" points) to a more radical rupture ("revolutionary moment").

Symptomatology

The relationship between objective overdetermination and subjective indeterminacy poses the question of how to interpret or construe crisis symptoms. This is the challenge of symptomatology, i.e., of establishing the contingently necessary relation between actual symptoms and underlying causal mechanisms. I relate this to disputes over the nature of crises, especially whether they are crises "in" a relevant order or crises "of" that order, which would require fundamental change. Another key feature of the subjective indeterminacy of crises concerns "what is to be done?" Here I distinguish between situations where established crisis-management routines can plausibly overcome challenges and restore order and those where a crisis in crisis-management requires a rethinking of crisis-management approaches or more radical change in the relevant system, complex, or social configuration. This is related to the asymmetry between attempts to develop an adequate account of the objective overdetermination of a crisis (if such it be) and the challenge of reading what exists *in potentia* in a crisis conjuncture and could be realized through appropriate strategies. For crisis-management and crisis reactions often involve speculative bets on an indeterminate future such that crisis construals and responses are performative – creating as yet unrealized possibilities or, conversely, aggravating contradictions, antagonisms, and conflicts. This has important implications for whether crises are managed to restore something resembling the *status quo ante* or seized as an opportunity "not to be wasted" for social transformation.

Discussion of crises often invokes the medical metaphor of crisis symptoms and the scope for decisive interventions into the course of an illness to cure it or, at least, minimize its effects. The key question is "what must the patient's mind-body (and her world) be like for these symptoms to appear?" Such retroductive questions are characteristic of critical realism. In the social world, the corresponding question is "what must the social (and natural) world be like for these crisis symptoms to appear?" This is an almost too easy comparison. However, less attention is paid to how actors and observers can decipher the causes of a non-medical crisis based on its symptoms and, where relevant, decide on whether, when, and how to intervene. To address this question, I employ a cultural political economy (CPE) approach that is informed by critical realism and shaped by a concern with the emancipatory potentials (as well as with the negative and often repressive consequences) of crisis (for the general approach, see Sum and Jessop 2013). CPE integrates research on sense- and meaning-making into the analysis of the basic features of capital accumulation, including its contradictions, crisis-tendencies, and crisis dynamics. But its general approach to the differential articulation of semiosis and

structuration can be applied far beyond the critique of political economy. The dual character of crisis means that struggles over crisis construal shape the nature and relative success, if any, of efforts at crisis-management, depending on whether or not the construals are substantively adequate to dealing satisfactorily with complex crises (typically by providing suitable ways of reducing their complexity as a basis for decisive action rather than waiting for more information at the risk of things getting worse or, perhaps, waiting optimistically for "something to turn up") and, consequently, providing suitable responses for at least some key actors affected by the crisis. An important aspect of this process is the nature of learning in, through and from crisis, whether from previous crises, which might guide adequate responses to current crises, or during current crises in real time with possible lessons for future crisis events or processes.

This raises the question of how to distinguish among the *phenomenal forms* of crisis and underlying causes and causal connections, the *contingent trigger* events – often external – that reveal crisis, and the more internal, structural factors that make crisis *necessary*. The disjunction between objective and subjective aspects also has implications about the *longue durée,* secular crisis tendencies, and the immediacy of crisis "events". In particular, it suggests a tendency to focus on immediate symptoms rather than causes that have operated over longer-term time and/or more extensive socio-spatial horizons. These are often entangled and require correspondingly complex periodizations in terms of interwoven temporalities and/or complex socio-spatial analyses reflecting the substantive causal mechanisms at play. This also reveals the Janus-faced nature of crisis – that is, the possibility (and necessity) of interpreting their historically overdetermined aetiology for the purposes of diagnosis and evaluating current possibilities of intervention with a view to prognosis and potentially decisive intervention to change the future in terms of conjunctural possibilities.

While crises become visible through symptoms, these have no one-to-one relation to crisis-tendencies and specific conjunctures. This explains the subjective indeterminacy that attends the objective overdetermination of crisis. Thus economic 'symptomatology' challenges the interpretive capacity of social agents just as medical symptoms challenge the knowledge and skills of physicians and surgeons. In both cases, of course, there are competing schools and interpretive paradigms (on competing schools in medicine, see Jessop, 2015). This is why crises are moments of profound cognitive and strategic disorientation. They disturb inherited expectations and practices; challenge dominant paradigms and produce radical uncertainty;

undermine faith in past lessons and ways of learning; open space for new lessons and ways of learning; and provide the context for struggles over the right way forward.

One way to address the challenge of symptomatology is to appropriate (and transform) the distinction, introduced by St Augustine in *De Doctrina Christiana* (Augustine of Hippo, 389 AD [1995]), between s*igna data* and s*igna naturalia.* He writes that 'a sign is something which, offering itself to the senses, conveys something other to the intellect'.[7] In this context, *signa data* largely comprise words, that is, the conventional linguistic relationship explored by Saussureans and social constructivists in terms of *signum* (sign) and *signans* (signifier). *Signa data* (sign-signifier relations) are used intentionally to convey a particular meaning.[8] In contrast, *signa naturalia* are natural, indexical signs that can be interpreted as symptoms of something beyond the *signum-signans* relation. Thus, St Augustine writes: 'Natural signs are those which, apart from any intention or desire of using them as signs, do yet lead to the knowledge of something else, as, for example, smoke when it indicates fire' (389 AD, Book 2, chapter 1). They are symptoms of an underlying reality, outward manifestations of some other fact, internal condition, quality, or overall state of affairs (cf. Favareau, 2006). Other examples of natural signs that he gives are animal tracks and an angry or sorrowful countenance (insofar as it is an unintended expression of inner feelings). Elsewhere he interprets some events as natural signs of the impending end of the world (Dyson, 2005, p. 46). The same temptation is found, of course, in contemporary catastrophist readings of crisis symptoms. To St Augustine's examples we can add symptoms of disease in medical diagnosis (linked to the medical notion of crisis) and those of economic crisis (and the attendant problems of interpreting their causal link to economic crisis-tendencies). Having mentioned these examples, St Augustine focuses on conventional signs and the hermeneutic problems of scriptural interpretation. This is where we must part company with him and return to *signa naturalia*.

St Augustine posits an objective relationship (or causal nexus) that connects an invisible entity to the visible signs that it produces. Nonetheless this relationship is not immediately transparent or self-evident but requires interpretation because there is no one-to-one relation between event and symptom. It is underdetermined. No algorithm can establish *the* cause (though expert systems with fuzzy logic may attempt to narrow down possible causes) and this poses a whole series of problems about causal interactions, infinite regress in time and infinite egress in space, and issues of attribution (including blame and responsibility). If we read symptoms as signifiers, then we can ask what is being signified and what is its referent? In these terms, crises

can be seen as stratified. Adopting critical realist language, we can say that they are generated by real mechanisms, they are actual events or processes, and they have evidential symptoms. This invites the question: what must the real world be like for this event to have occurred and/or these symptoms to exist? Thus, the challenge is to relate the empirical symptoms, actual crisis, and underlying mechanisms as a basis for possible decisive interventions. This is the field of 'symptomatology'. It is based on trial-and-error observation and construal that draws on past experience but may also require forgetting as a basis for 'correct' intervention.

Scientific validity

Moving beyond these remarks and thinking about crisis construal more generally, construals can be assessed in three ways. The first is in terms of their *scientific validity*, i.e., their conformity with prevailing scientific procedures and rules of evaluation. The second is in terms of the *narrative plausibility* of a given construal in identifying and explaining the (symptoms of) crisis relative to the prevailing discourses in circulation among relevant social forces. The third is in terms of the *pragmatic correctness* of construals, i.e., their ability to read a conjuncture, discern potential futures, provide a plausible narrative, and guide action that transforms the conjuncture (Lecercle, 2006).

In a crude way, these distinctions correspond to the explanation of past events and processes leading to the present conjuncture, a narrative account that builds on a specific construal of the past to describe the present and draw conclusions for the future; and a speculative prediction coupled with prescriptions for action about what might be achievable when crisis is taken as an opportunity. These criteria involve different epistemological judgements. Scientific validity depends on specific protocols of investigation and acknowledges that conclusions may be fallible. Narrative plausibility depends on rules of argumentation oriented to persuasion rather than apodictic truth. In this context, while scientific argument has its rhetorical features, these should be subordinate to scientific analysis; conversely, the plausibility of crisis narratives may be enhanced by reference to facts, but these are selected to lend credibility to the overall narrative with the result that the factual elements are less rigorous and comprehensive and will often screen out inconvenient details.[9] Pragmatically correct construals are epistemologically different again because they involve what currently exists (if at all) only in potentia, may never be actualized, and cannot therefore be analysed in the same ways as the past and present. At stake here, then, is the distinction between the *explanation* of past and present events, processes

or conjunctures and the *prediction* of the future of *open systems* where development depends on the strategic and tactical choices of diverse actors and social forces. Here prediction is related not just to the objective indeterminacy of the future but also – crucially – to the agents' differential capacity to shape their future through actions and inactions.

The validity of scientific explanation depends on scientific procedures and rules of evaluation according to specific scientific programmes and paradigms. At stake here is crisis considered as an external, objective phenomenon that is subject to first-order observation by third parties of its origins, course, and potential resolution. Crisis construals may address a more or less broad range of questions. This involves, among other issues, delimiting the origins of a crisis in space-time and its uneven spatio-temporal incidence and development; identifying rightly or wrongly purported causes (agential, structural, discursive, and technical) at different scales, over different time horizons, in different fields of social practice, and at different levels of social organization from nameless or named individuals through social networks, formal organizations, institutional arrangements, specific social forms, or even the dynamic of a global society; determining its scope and effects, assessing in broad terms whether it is a crisis '*in*' or '*of*' the relevant arrangements; reducing its complexities to identifiable causes that could be targeted to find solutions; charting alternative futures; and promoting specific lines of action for socially identified forces over differently constructed spatio-temporal horizon.

Scientific validity does not require a full explanation of an overdetermined event or process. Provided they have some basis in the objectively overdetermined nature of the crisis, different scientific readings may reduce its complexity by selectively construing some aspects of its objective features as important, while others are marginalized, ignored, or remain invisible. The objective overdetermination and subjective indeterminacy create a space for *plausible* alternative *contested* readings of a crisis *within specific limits*. This does not imply that scientific accounts are always accurate. Scientific inquiries are distorted by scientists' own ideological assumptions. Thus, in addition to the cognitive limits related to the scientific legibility of a crisis for differently situated observers using different methods of investigation, construals may also reflect specific ideal and material interests of these observers as revealed through the critique of ideology and/or domination. This is, of course, a standing criticism of the attempts of orthodox economists to explain the recurrence of economic crises (see, for example, Matthew Watson's arguments in Chapter 4).

Narrative plausibility

Scientific explanations have their logic but may lack narrative plausibility for those directly or indirectly affected by "the crisis" or charged with responding to it. Narratives have a different structure from scientific explanations. They emplot selected past events and forces in terms of a temporal sequence with a beginning, middle, and end in the form of a story that embodies causal and moral lessons. The plausibility of narratives and other construals and their associated crisis-management solutions (including inaction) depends on their resonance with (or capacity to reinterpret and mobilize) key social forces. For example, neo-liberals narrated how trade union power and the welfare state undermined economic growth in the 1970s and called for more market, less state. The Tea Party and Occupy Wall Street movements offer different narratives about the recent crisis and reach radically different conclusions. Narratives play a key role in strategic action because they can simplify complex problems, identify simple solutions, connect to common sense and mobilize popular support. To be effective in the long run, however, they should correspond to the objective conditions and the real possibilities of action. Yet strategies based on "inorganic" narratives, however, can have adverse path-shaping effects, making recovery from a crisis harder or shifting its forms and consequences.

Although many plausible narratives may be advanced, their narrators will not be equally effective in conveying their messages and securing support for the proposed solutions. Powerful resonance does not mean these construals and solutions should be taken at face value. All narratives are selective, appropriate some arguments, and combine them in specific ways. So, we must also consider what goes unstated or silent, repressed or suppressed, in specific discourses. Interpretive power depends on the "web of interlocution" (Somers, 1994) in different fields and its discursive selectivities, the organization and operation of the mass media, the role of intellectuals in public life, and the structural biases and strategically selective operations of various public and private apparatuses of economic, political, and ideological domination. This is mainly an issue of political contestation, broadly interpreted.

An important distinction here concerns interpretive power and interpretive authority (cf. Heinrich and Jessop, 2014). The former refers to differences in the ability of social forces to identify and construe urgent social problems and translate these into policies, successful or not, intended to address maintain or transform the world. This is not so much a question of having

the best scientific analyses and most persuasive arguments as it is one of having the capacities to act upon a given interpretation, which also involves access to key decision-making structures, the availability of appropriate governmental technologies, and the ability to mobilize sufficient support to make a difference in a particular conjuncture. Interpretive authority is narrower in scope but sometimes more significant in practice. It refers to the legal instance or authority with the legal right to interpret the law in a given juridico-political context and translate that interpretation into policy. This is especially important regarding the right to declare a state of emergency (e.g., military, political, or economic) and authorize exceptional crisis-management measures. More generally, this distinction shows the limits of a purely constructivist approach to crisis management that somehow forgets that institutions matter too. This poses issues about the narrative plausibility of scientific explanations and/or extra-scientific ways to frame the

Pragmatic correctness

Whereas scientific validity concerns the genealogy of the crisis as an event and/or continuing process, pragmatic correctness is judged in the light of future developments, including counterfactual analysis, and depends on social agents' ability to read present and future conjunctures in terms of what exists *in potentia* and how it might be realized. I now elaborate these remarks. Plausible narratives are typically an important moment of pragmatic correctness.

It is one thing to identify the *real* causes of *actual* crisis symptoms as a basis for crisis management intended to restore the status quo ante and/or to stabilize the situation. It is another to decide on possible courses of more radical transformative action in response to crisis. This requires moving beyond a strictly scientific programme to consider the emancipatory (or other) potentials present in a given crisis conjuncture, which involves thinking crisis in counterfactual terms. This brings us to the moment of pragmatic correctness. This aspect is mediated through language as well as through social practices and institutions beyond language. Indeed, since the development of print media at least, crisis construal is heavily mediatized, depending on specific forms of visualization and media representations, which nowadays typically vary across popular, serious, and specialist media. Pragmatic correctness depends on: (1) the strategically selective limits to action set by the objectively overdetermined form of a crisis conjuncture; (2) the interpretive and mobilizing power of crisis construals and strategic perspectives – notably its ready communicability to relevant audiences – which affects the

capacities of strategic forces to win hegemony; and (3) the balance of forces associated with different construals or, at least, the ability of some forces to impose their preferred construals, crisis-management options, and exit solutions (Lecercle, 2006, pp. 40-41; Debray, 1973, pp. 106-7; and, on the analysis of the first limit, Patomäki, 2008).[10]

Considered in these terms, to paraphrase Gramsci, 'there is a world of difference between conjunctural analyses [he writes of ideologies] that are arbitrary, rationalistic, and willed and those that are organic' (Gramsci, 1971, 376-7; 1975, Q7§19, p. 868). The former analyses misconstrue the crisis – minimizing or exaggerating its scale and scope and its system-threatening qualities – and misidentify necessary or feasible solutions. An organic analysis is an at least minimally adequate analysis of the objective dimensions of the crisis and its manageability or transformability in terms of a possible attenuation of crisis symptoms, muddling through, displacement or deferral, etc. and in terms of the correlation of forces and the strategic horizons of action of the social forces whose ideal and material interests it represents. This raises the key issue of the (always limited and provisional) fit between imaginaries and real, or potentially realizable, sets of material interdependencies in the real world. Proposed crisis strategies and policies must be (or seen to be) effective within the spatio-temporal horizons of relevant social forces in a given social order.

In all cases, how a crisis is managed has path-shaping effects: responses affect the manner in which subsequent crises will develop. This corresponds to the idea that crises are moments where a decisive intervention can mark a turning point in the progress of a disease or other critical conjuncture. Furthermore, even scientifically invalid and/or conjuncturally incorrect construals, when translated into responses, will have constitutive or constructive effects. In many cases what is 'correct' organically and chronologically (being first to resonate and/or to impose agreed reading) matters more in *selection* than 'scientific truth'.

Indeed, a 'correct' reading creates its own 'truth-effects' and may then be *retained* thanks to its capacity to shape reality. Getting consensus on an interpretation about which of different aspects of a crisis or, alternatively, which of several interlocking crises matters is to have framed the problem (variation). Nonetheless this consensus must be translated into coherent, coordinated policy approach and solutions that match objective dimensions of the crisis (selection). Effective policies adapt crisis-management routines and/or discover new routines through trial-and-error experimentation and can be consolidated as the basis of new forms of

governance, meta-governance, and institutionalized compromise (retention). Only crisis construals that grasp key emergent extra-semiotic features of the social world as well as mind-independent features of the natural world are likely to be *selected* and *retained*. Effective construals therefore also have constructive force and produce changes in the extra-semiotic features of the world and in related (always) tendential real mechanisms and social logics.

As Friedman's observation reminds us, those affected by crisis typically disagree both on their objective and subjective aspects because of their different entry-points, standpoints, and capacities to read the crisis. The system-specific and conjunctural aspects of crises have many spatio-temporal complexities and affect social forces in quite varied ways. The lived experience of crisis is necessarily partial, limited to particular social segments of time-space. So, it is hard to read crises. Indeed, if spatiotemporal boundaries are uncertain, if causes and effects are contested, can we speak of THE CRISIS? As Gramsci noted, writing on the Great Depression:

> Whoever wants to give one sole definition of these events, or what is the same thing, find a single cause or origin, must be rebutted. We are addressing a process that shows itself in many ways, and in which causes and effects become intertwined and mutually entangled. To simplify means to misrepresent and falsify. … When did the crisis begin? This question is bound up with the first since we are dealing with a process and not an event … It is hard in real terms to separate the economic crisis from the political and ideological ones, etc. (1995: 219; cf. Gramsci, 1975, Q15, §5).[11]

Resolving a crisis into one essential crisis, let alone one with one main cause, involves at best *strategic essentialism*[12] rather than rigorous scientific practice. This said, simplifications may be necessary to begin to respond to a crisis when its character is as yet unclear, but its immediate effects are serious and wide-ranging. Actors do not always have the luxury of postponing action until the nature of the crisis becomes evident – even refusing to act could alter its dynamic as process (as opposed to event) and a judicious "wait-and-see" approach, considered or nonchalant, may well enable others to fill a strategic, political, or policy void with path-shaping consequences. Thus, simplifications may be correct in the circumstances – they may help to create suitable conditions to learn lessons and take effective action. This is why a critical realist, CPE approach needs to consider how different actors or social forces learn in, about, and from crisis – especially as the symptoms and causes of crisis (not the

CRISIS) will affect them differently in space-time as well as in relation to identities, interests, and values.

Often, wider ideational and institutional innovation going beyond the economy narrowly conceived is needed, promoted and supported by political, intellectual and moral leadership. Indeed, as Milton Friedman put it hyperbolically but tellingly: "[o]nly a crisis produces real change. When that crisis occurs, the actions that are taken depend on the ideas that are lying around" (1965, p. 32). It follows that preparing the ground for crisis-induced strategic interventions helps to shape the nature and outcome of crisis-management and crisis responses. Inadequate preparation (for whatever cause) makes it harder to influence struggles over crisis-construal and crisis-management, even if the eventual crisis construal is "organic". Magnus Ryner's chapter in this volume illustrates the problems that arise when crisis construals are more fantasmagoric than organic; and Angela Wigger demonstrates this in her chapter regarding EU industrial policy strategies, where previous lessons on competitiveness strategy went unheeded.

The Pedagogy of Crisis

Another important aspect of crisiology is the pedagogy of crises, i.e., learning in and from crises and drawing lessons for future crises. This provides the basis for a fourfold distinction between past lessons being thrown into crisis, learning in crisis, learning about crisis, and learning from crisis (see Ji 2006; Jessop 2015; Sum & Jessop 2013; and Table 1). In brief, the first term indicates the disorienting effects of crisis on expectations and routines, rooted in past lessons. The others merit more extended but still necessarily limited discussion. This implies that crises are moments for critical reflexion that leads to unlearning past lessons together with learning *in, about* and *from* crisis and, in this context, for theoretical, policy, and practical innovation. These processes affect different actors or social forces in different ways and are often deeply contested and different actors and social forces may traverse these analytical distinct (but potentially overlapping) stages in different ways. This occurs in part because the crisis affects them differently in space-time as well as in relation to their different identities, interests, and values.

Learning can be instrumental (including successful muddling through), critical (or counter-critical), or emancipatory. Its goals and potentially transformative effects matter especially for

policy and strategic learning in the face of crises (including crises of crisis-management). Just as medical diagnosis requires knowledge about the relation between symptoms and underlying causes based on careful observation, trial-and-error experimentation, and successful retroduction (i.e., asking what the world must be like for 'x' to happen), so does the correct diagnosis of crisis symptoms in the social world and their translation into effective 'treatment' of the crisis or, at least, useful lessons for future attempts at crisis-management. For, while crises become visible through their symptoms, the latter have no one-to-one relation to crisis-tendencies and specific conjunctures. Thus, both social and medical crises, the relation between symptom and generative mechanisms is grounded in a causal nexus that connects an invisible entity to the visible signs it produces. This explains the subjective indeterminacy that attends the objective overdetermination of the crisis.

The following remarks distinguish for analytical purposes between those affected directly or indirectly by the crisis as it unfolds and those who are not so affected, either because they are studying *past* crises to draw lessons for the present or future and/or because they are motivated by disinterested curiosity in the nature of past or present crises (for example, to compare and contrast crisis dynamics in different contexts for scientific purposes in order to understand and explain crisis-tendencies as neutral observers).

Learning in crisis occurs in the immediacy of crisis, considered as a moment of profound disorientation, and is oriented to the phenomenal forms of crisis. For those directly affected, it occurs via direct experience (*Erlebnis*) of its *phenomenal* forms. Lived experience will vary across persons, groups, organizations. Thus, the first phases of a crisis generally prompt massive *variation* in construals. Many early accounts disappear in the cacophony of competing interpretations or lack meaningful connections to the salient phenomenal forms of the crisis. This holds for religious readings of the crisis as signs of divine retribution for moral degeneration, for example, and for the equally fanciful claim that the terminal crisis of capitalism had arrived. Significant shifts can also occur in hegemonic imaginaries. Alan Greenspan, former Chair of the US Federal Reserve, for example, famously conceded that the NAFC had led him to identify 'flaws' in the operating ideology that he had used to steer the US economy: namely, the efficient market hypothesis (Greenspan 2008). For those not directly affected, learning in crisis occurs through real time observation of the *phenomenal* forms of crisis. This is often mediated through diverse forms of representation (serious and tabloid journalism, statistics, charts, econometric models, reports, etc.) and can be highly mediatized.

In neither case does such learning dig beneath surface phenomena to deeper causes, crisis-tendencies, etc.

Learning *into* crisis	Crisis throws past lessons into confusion and may disrupt established modes of learning, making it harder to learn, and leading to false, 'fantastic', simplistic, partial, incoherent, or contradictory lessons
Learning *in* crisis	Occurs through actors' direct experience of the *phenomenal* forms of crisis. This will vary across persons, groups, organizations, *or* For 'outsiders', occurs through real time observation of *phenomenal* forms of crisis – often mediated through diverse forms of representation
Learning *about* crisis	Occurs when actors learn about deeper causes and dynamics (often discovered through efforts at crisis management) *or* Occurs when 'outsiders' focus on real causes, dynamics, effects and observe actors' trial-and-error attempts to solve or shape crisis
Learning *from* crisis	Learning from a directly experienced crisis after 'it' ends Learning from a crisis that one has observed in real time after 'it' ends Both may re-enter learning process through 'historicity'

Source : Based on arguments in this chapter

Table 3.1 The Pedagogy of Crisis

Learning in crisis occurs in the immediacy of crisis, considered as a moment of profound disorientation, and is oriented to the phenomenal forms of crisis. For those directly affected, it occurs via direct experience of its *phenomenal* forms. Lived experience varies across persons, groups, organizations. How a person experiences and understands his/her world(s) as real and

meaningful depends on their subject positions and standpoint. Organizations also have specific modes of calculation that reflect their specific interests. For those not directly affected by a current crisis, *learning in crisis* occurs through real time *observation* of the relevant phenomenal forms. This is often mediated through diverse forms of representation (serious and tabloid journalism, statistics, charts, econometric models, reports, etc.) and can be highly mediatized (MacKenzie 2009; Engelen et al. 2011; Tetlock 2007; Pahl 2011; on mediatization, Hajer 2011). Specific forms of visualization and media representations typically vary across popular, serious, and specialist media. In no case, by definitional fiat, does learning in crisis dig below surface phenomena to deeper causes, crisis-tendencies, and so on.

Learning about crisis occurs with lags in real time as a crisis unfolds, often in unexpected ways, and as the routine crisis-management measures resorted to by actors prove (or seem to be) inadequate or inappropriate. Common sense and/or instituted social imaginaries typically ignore key features of the actually existing natural and social world. In capitalist economies, for example, these features include: contradictions, dilemmas, crisis-tendencies and counter-tendencies; important extra-economic conditions of existence and effects of economic practices and institutions; and the uneven links across different scales of economic action and their embedding in broader spatio-temporal frameworks. These features operate even when they are unacknowledged by first-order social agents (and/or are denied by observers) and, because of their interaction in specific contexts and conjunctures, may generate crisis-tendencies or otherwise disorient agents and observers, prompting the occasion for learning more about the facticity of the natural and social worlds. For those directly affected, this occurs when attention turns from phenomenal forms to deeper causes and dynamics and their bearing on crisis management. Trial-and-error experimentation through efforts at crisis-management is a key element of learning about the nature of the crisis. In financial crises, for example, this is possible for those directly tasked with crisis-management (e.g., central bankers, international financial institutions, key figures in the political executive, and regulators) and/or those able to guide the official approach to crisis-management, whether by reinforcing hegemonic or dominant paradigms or reviving, reinventing, or relaying plausible alternatives. These lessons are rarely purely technical or instrumental but are also shaped by the changing political conjuncture (broadly defined) in which efforts to manage the crisis occur (cf. Poulantzas 1979; for an application of Poulantzas to the politics of austerity, Seymour 2014).

For those without the power to translate construals directly into policy, key mediating roles in the process of *learning about crisis* are played by financial, economic, and political journalists alongside such 'usual suspects' as research institutes, think tanks, vested economic interests, lobbies, and academics. Not all actors or observers move to this stage because it involves not only interpretive power but also the capacity to translate construals into authoritative action. An interesting example of this is Hyman Minsky's analysis of the role of speculative and Ponzi finance in financial crises, leading him to ask whether "it" can happen again (Minsky, 1982). Without the authority to translate his observations into policy, the role of Ponzi finance in particular had to be relearnt in the North Atlantic Financial Crisis, when policy-makers and commentators rediscovered the "Minsky moment" (for further discussion, see Rasmus, 2010). Learning about crisis may also occur among those who seek to resist, subvert or redirect official responses and/or to develop alternative approaches that do not rely on access to the 'official' levers of power, including the ability to resort to 'exceptional' measures. In either case, such learning is typically highly selective, partial, and provisional as well as mediated and mediatized. Finally, for retrospective learning *about* crisis, whether interested or disinterested, lessons may well draw on contemporary accounts.

The 'unmarked' and 'unobserved' take their revenge on those who ignore them, and this leads to crisis or other system failures. This is where learning *about* crisis and its roots in the unacknowledged matter. For in this analytically distinct (but not necessarily sequentially distinct) phase of crisis construal and management, these processes are more experimental as actors seek to make sense of the crisis not merely at the phenomenal level but also in terms of underlying mechanisms and crisis dynamics. For those directly affected, this occurs when attention turns from phenomenal forms to deeper causes and dynamics and their bearing on crisis management. For 'outside' observers, it occurs when they focus on real causes, dynamics, effects and monitor actors' trial-and-error attempts to solve crisis and/or how other 'outsiders' seek to shape its course, costs, outcome. Not all actors or observers can or do move to this stage and it is typically highly selective, partial, and provisional as well as mediated and mediatized.

Learning from crisis occurs later, as crisis-management efforts succeed, or recovery takes place for other reasons, and actors reflect on the crisis and its import for future crises and crisis-management. Whether one has directly experienced the crisis or 'merely' observed it in real time, learning from crisis occurs after 'it' ends. Learning from a crisis can also occur through institutionalized inquiries, based on reports from those who experienced it, observed it, and

tried to describe, interpret, and explain it. This is an important mechanism of policy learning for future crisis prevention and crisis management. In contrast to learning in and about crisis, learning from crises may happen much later based on lessons drawn from other times and/or places. Such studies may be limited to iconic, high profile, or benchmark crises or aim to be more comprehensive. Relevant comparators and appropriate lessons are often disputed, as demonstrated by the continuing debate on the 1930s Great Depression. , the genealogy and impact of which is endlessly contested, revisited, and revised because of the changing interests at stake.

Learning from crisis may shape policies and individual and collective strategies in two ways. First, lessons learnt by those directly affected can be conveyed in more or less codified terms to others who experience similar crises. This may lead to fast policy and/or strategy transfer, whether appropriate or not. Because learning and normal politics both 'take time', crises create pressure to act based on unreliable information, narrow or limited consultation and participation. Calls for quick action lead to shorter policy development cycles, fast-tracking decision-making, rapid programme rollout, continuing policy experiments, institutional and policy Darwinism, constant revision of guidelines, and so on. An emphasis on speed affects the choice of policies, initial policy targets, sites where policy is implemented, and the criteria adopted for success. It also discourages proper evaluation of a policy's impact over various spatio-temporal horizons, including delayed and/or unintended consequences and feedback effects.

Second, lessons drawn by 'outside' observers may be conveyed to those directly affected as more or less codified guidance for managing future crises. However, there is many a slip between the discursive resonance of old, reworked, or new imaginaries in a given conjuncture and their translation into adequate policies, effective crisis-management routines, durable new social arrangements, and institutionalized compromises to support renewed accumulation. Indeed, codification of knowledge can backfire where it is followed too rigidly without regard to the tacit knowledge and improvisation that also shaped crisis-management. The one-size-fits-all lessons of bodies such as the IMF illustrate this and can be contrasted with the very different lessons drawn from Iceland's handling of its disastrous liquidity and solvency crises – and, indeed, with the recent admission by the IMF that it had underestimated the impact of austerity on debt-default-deflation dynamics. Very different lessons can be drawn from how Iceland handled its financial crises against IMF advice (Sigfússon 2012); and the IMF has

admitted that it had underestimated austerity's impact on debt-default-deflation dynamics (Blanchard & Leigh 2013).

Lessons from the past can be invoked in all three types of learning. Sometimes this involves seeking good historical parallels to guide crisis responses in real time – with the risk of drawing false analogies and/or missing novel features. Even clear parallels may not alert policy-makers to the risks involved in following failed policies. Thus Boyer (this volume) notes that the Baltic States repeated the errors that contributed to the 1997 East Asian crises by incurring large debts in foreign currency. Lessons from the past can also be deliberately invoked to steer crisis construal toward one rather than another set of crisis measures (on historical parallels, see Samman 2013).

Reflections on learning in, about, and from crises has spawned a huge literature on crisis management, intervention, and communication. But this adopts a mainly instrumental position with limited implications for developing the critique of political economy. On this last point, it is worth recalling Karl Deutsch's aphorism that power is the ability not to have to learn from one's mistakes (1963, 111). In other words, elites may try to impose the costs of their mistakes onto others as well as to shape learning processes and, in particular to control ex post inquiries into crises and lessons drawn therefrom. For, given asymmetrical power relations, crises may also lead to the re-assertion of old ideas and values, policy paradigms, and routines (traditionalism, reaction, restoration). This remark highlights structural and strategic asymmetries that might influence both policy and political learning. Learning may not be translated into new policies: "identifying lessons" is not the same as "acting on them" and many factors can interfere here. Agents may lack the capacity (technologies, suitable leverage points, or access to power) to act on lessons learnt; the powerful may block action where they believe it might hurt their interests. There are many other causes of learning failure. These include drawing simplistic conclusions, fantasy lessons, falsely generalized lessons, turbulent environments that quickly render lessons irrelevant, rhetorical learning, limits on learning due to prior political or policy commitments, politicized learning that reflects power relations, and ideological or social barriers that block active learning. In addition, as noted above, codified lessons miss tacit, implicit lessons/practices.

Conclusions

Crises are potentially path-shaping moments that provoke responses that are mediated through semiotic-cum-material processes of variation, selection, and retention. A critical realist approach to crises that takes seriously their duality – objectively overdetermined, subjectively indeterminate – must combine structural and semiotic analyses. It would examine: (1) how crises emerge when established patterns of dealing with structural contradictions, their crisis-tendencies, and strategic dilemmas no longer work as expected and, indeed, when continued reliance thereon may even aggravate matters; (2) how contestation over the meaning of the crisis shapes responses through processes of variation, selection, and retention that are mediated through a changing mix of semiotic and extra-semiotic mechanisms. This approach opens space for studying the variation, selection, and retention of crisis construals and policy lessons as crises develop. Crisis construals establish 'truth effects', i.e., the hegemonic or dominant meanings of crisis result from power relations. They are not the outcome of a co-operative language game with fixed rules but of a political struggle with variable rules and contested stakes (Lecercle, 2006, p. 98). In this sense, construals are not simple *linguistic (re-)descriptions* of a conjuncture but, when backed by powerful social forces, involve *strategic interventions* into that conjuncture.

The mechanisms of variation, selection, and retention that privilege some crisis construals over others and some crisis lessons over others produce particular "modes of crisis management" that are not dictated solely by the objective overdetermination of the crisis nor by "arbitrary, rationalistic, and willed" construals of this, that, or another social force. At stake here is the production of "truth effects" that are not so much scientifically valid as pragmatically correct in specific conjunctures. In other words, these construals offer a sound objective analysis in terms of the correlation of forces as well as underlying causes and can gauge and guide the strategic horizons of action, organizing effective action and disorganizing opposition. In general, then, learning in, about, and from crises is relevant to the critique of political economy, to strategic and policy learning on how to prevent and/or manage crises, and to political learning.

Endnotes

[1] On the important distinction between crises as events or processes, see Forgues and Roux-Dufort (1998).

[2] In foreign and military affairs, 'false flag' operations are attempts to manufacture crises and provide a *casus belli*. Analogous activities occur in other fields.

[3] Such empiricist approaches are criticized by Rasmus 2010.

[4] For a less complex, but still important (and widely-cited), discussion of crisis as event vs crisis as process, see Forgues and Roux-Dufort 1998.

[5] In practice, however, counter-cyclical policies were often badly executed, proved /pro-cyclical, and, over time, led to stagflation.

[6] Imaginary refers here to sets of cultural elements common to a given social group (or groups) that shape 'lived experience' and help to reproduce social relations.

[7] '*Signum ... est res praeter speciem quam ingerit sensibus, aliud aliquid ex se faciens in cogitationem venire*' (cited Favareau 2006: 4)

[8] There is some debate about the appropriate translation of signa data regarding whether the emphasis is on the *intention* behind the use of the sign or its conventional linguistic character (see Jackson 1968: 13-15). For present purposes, this is irrelevant because my focus is on signa naturalia, where intention is absent.

[9] This is analogous to the distinction drawn by Wallis and Brian Dollery (1999, p. 5) between scientific and policy paradigms: "In essence, policy advisers differentiate policy paradigms from theoretical paradigms by screening out the ambiguities and blurring the fine distinctions characteristic of theoretical paradigms" (1999, p. 5).

[10] 'The study of possible futures must be grounded on the analysis of causally efficacious geo-historical layers of reality – agency, structures and mechanisms' (Patomäki 2008: xiii).

[11] The whole note is interesting because it distinguishes empirical features, the crisis as event and process, and its underlying causes considered as crisis-tendencies and counter-tendencies.

[12] This notion was introduced by Gayatri Chakravorty Spivak (1987), who uses it to describe the discursive construction of an 'essential unity' among heterogeneous groups as a basis for strategic political action in relation to nationalities, ethnic groups, gender politics and other movements. It can be generalized to other forms of though and action oriented to strategic interventions.

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