

# The Culture Form of Crisis\*

Dirk Baecker

Zeppelin University

**ABSTRACT:** Crises are institutions of a kind in any society. They are bound to happen routinely even if in tribal societies, there seems to be no word for them, and ancient and modern society give different meanings to the notion. This paper looks into the relationship between crisis and society, describes crises as events belonging to the immune system of society, and determines the four culture forms of crisis typical of tribal, ancient, modern, and next society. The paper starts by examining the paradox that a crisis is bound to happen in a society that in all other respects works fine. If not, society would be destroyed. This paradox translates into a coding of events of crisis, which distinguishes the positive side of breakdown from the negative side of design. 'Positive' here means that there are some events of crisis positively indicated, 'negative' that there is reflection about these events, which puts them into a broader picture of the structure and culture of society designed to reproduce itself.

## *Paradox*

A crisis is a crisis, and it is not. It is complex, positive and negative, real and imaginary. Its state is as unclear as its notion (Koselleck 1982). While it is unfolding, thus putting in jeopardy a range of communications and actions deemed ordinary in ordinary times, other actions and communications unconcernedly go on, reproduce, and thrive. People meet, read newspapers, watch television, blog, twitter, and pray. They study and work.

A first statement about crisis may thus read as follows:

$$\text{crisis} := \boxed{\text{crisis}} \quad (\text{C1})$$

We use George Spencer-Brown's (2008) mark of a re-entry,  $\boxed{\quad}$ , to indicate a distinction being drawn and re-entered into the space of its distinction. It marks a state, calls it 'crisis,' and watches for any outside of the distinction, something the crisis may be distinguished from, to come with the distinction. Any crisis presumes a state of affairs in which not everything is at

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crisis, such that to call a state a 'crisis' means to call for further specification and, coming with it, limitation.

Looking at the form of the distinction, i.e., at its inside, its outside, the cross being made, and the space surrounding it and produced by the mark, we realize that the indication of crisis implies something else going on as well, namely the negation of crisis as the indication of a state the crisis is distinguished from.

A possibility to read statement C1 is to read 'crisis' as the indication of a crisis, and as the negation of that indication to indicate the negation of the crisis. A crisis is a crisis, and it is not.

### *Society*

A sociological way to be explicit about the paradox inherent in the indication of a crisis is to look at society both calling the crisis a crisis and reproducing itself while calling 'crisis.'

Spencer-Brown's notation of indications allows us to put the sociological observation into a second statement:

$$\text{crisis} = \boxed{\text{crisis} \mid \text{society}} \quad (\text{C2})$$

Now there is a marked outside to the first distinction, marked by a value called 'society,' and a new unmarked state at the outside of the distinction of crisis from society. Moreover, the distinction of crisis from society is re-entered into its own space indicating the complementary and circular structure of both values. The mark of re-entry operates to indicate, negate, and imply at the same time (Spencer-Brown 2008: 90). In our case it indicates a crisis, negates that very crisis -- since for a crisis to be possible something else must reproduce ordinarily -- and implies a society as the place where both things are happening: a crisis unfolding and its negation framing its indication.

There may be other ways to mark the outside of the distinction of a crisis, for instance 'God,' 'nature,' or 'history' (Douglas 1989), but the perspective of this paper is to focus on 'society.' Society here means nothing else but ongoing operations of action and communication, even while certain problems, understood as crisis, are wearing on the reproduction of these operations (Luhmann 1997). "Wie in einem unbeabsichtigten perversen Effekt kommt bei ständigen Krisendiagnosen nach und nach heraus, daß es sich gar nicht um Krisen handelt, sondern um die Gesellschaft selbst" (Luhmann 1991: 148).

### *Immune System*

Paradox means that the indication of a crisis as its negation with respect to a society being implied as running on does not stop there. We do not attempt to dispel any diagnosis of crisis in favor of the picture of a society unconcernedly reproducing itself. Instead, the negation hits society as well. Why else should there be talk of crisis? It is society in crisis we are talking about, a society reproducing while, and perhaps by, being in crisis.

A society gives good reasons for a crisis, whatever they may be. The crisis concerns a society in jeopardy. It is a crisis negating and implying society, and it is society negating and implying the crisis.

We watch a paradox unfolding by proceeding from statement C1, 'a crisis is a crisis, and it is not,' to statement C2, 'a crisis negates a society it implies.' The paradox engages the observer with peculiar problems she otherwise would not notice, and provides her with a frame -- 'society' -- to produce information she otherwise would not deem necessary.

The peculiar place for such a paradox in society is the latter's immune system (Luhmann 1995: 369-77). It typically blocks routine observations while reproducing operations such that alternate observations are called for to redirect operations. Society is here recursively producing its own nonlinearity such that problems which become apparent may henceforth be avoided.

### *Coding*

In order for a paradox to become creative it needs to be translated into a code. A code combines a positive and a negative value into a form able to reproduce as the *eigen*-value of a recursive function (von Foerster 2003). The positive value describes a certain state of the world as produced by an act of cognition. The negative value is not just the negation of the positive value but a generalization of it with respect to some necessary, if indeterminate implication. The negative value calls for an act of volition, an act of free will directed at determining the positive value (Günther 1979; Luhmann 1981).

Coding thus assumes that nothing is what it is, but must be enacted to become something.

A crisis is only a crisis if something else is not in crisis, thereby 'negating' the crisis. We have a positive value, which indicates some breakdown of things or expectations, and a negative value, which distinguishes the breakdown from resources to draw upon to handle the

breakdown. Without using the language we are using here, Terry Winograd and Fernando Flores call this negative value 'design' because design consists in anticipating and preempting breakdowns (Winograd/Flores 1986).

We thus have a coding of the paradox of crisis constituting an immune event of society, which reads as follows:

$$\text{crisis} = \boxed{\text{breakdown} \mid \text{design}} \quad (\text{C3})$$

Phrasing this code in the form of the reentry of the distinction into the space of distinction means that both values of the code inform each other. Design takes us to look at breakdown, and breakdown to look at design. When this happens without further notice, paradox ensues. Issuing further notices means to unfold the paradox, be it with respect to time, matter, or culture.

With respect to time, breakdown and design occupy different moments in time, one preceding the other, whether it be breakdown or design coming first. With respect to matter, the breakdown of one thing lets us look at another still working, or vice versa. And with respect to culture, we look at a different perspective, which leads one observer to indicate breakdown where the other discerns design, and vice versa.

If this kind of coding works in specific situations, and works well, it condenses into an *eigen*-value of the recursive reproduction of society, which qualifies as 'crisis.'

### *Culture Forms*

To flesh out with social data such an idea of crisis, being coded as a paradoxical event in the immune system of society, we focus on four different culture forms of crisis: crises in tribal society, in ancient society, in modern society, and in next society. When speaking of 'culture form' of crisis, we refer to its way to register and answer the overflow of information produced by the communication media of the respective society (Luhmann 1997: 409-12; Baecker 2007, 2007/8).

This follows the idea that a distributive medium of communication is not just making it easier to communicate but also producing the problem of how to structurally and semantically handle new ways of communication. There is a multitude of media, success media, distribution media, and mass media (Luhmann 1997: chap. 2). For the time being, we stick to

a selection of distribution media, namely to oral language, writing, the printing press, and the computer and its networks.

Oral language makes it possible to talk about what is absent, to say both Yes and No, not just to betray but to lie outspokenly. Tribal society emerges and sets topographical boundaries to control who may talk when, to whom, about what (Lévi-Strauss 1963). Boundaries are the culture form to handle the meaning overflow of oral language.

Written language makes it possible to extend the time horizons of society both toward a possible future and a remembered past. Political and economic plans and strategies become possible whose aims, successes, and failures disrupt the social balance of tribal society. Ancient society with its social stratification, its state households, its private houses, and its cosmological belief in the purposeful pursuit of perfection emerges, telling everybody which plans are legitimate and which are not (Polanyi 1957). *Teloi*, Greek for 'appropriate purpose,' are the culture form to handle the meaning overflow of written language. They provide for perfection in distinction from corruption.

The printing press makes it possible for almost everybody to read and write. It forces everybody to acknowledge that others might have read whatsoever they deemed important as well. Society literally gets into a state critical of itself, called 'enlightenment,' since everybody possibly criticizes everybody else, and everybody has to be able to answer criticism (Kant 1996). Modern society emerges and invents individualism, reason, and the dynamics of democracy, markets, and schooling. Equilibrium, the ability to withstand unrest by restabilizing dynamically, becomes the culture form able to handle the meaning overflow of the printing press. It is a concept which applies both to the (Cartesian, i.e., doubting) individual and his body and mind and to an economic concept of society and which highlights the search for and adaptation to new opportunities (of both progress and decadence, as liberals and cultural critics become eager to show). Rationality is a concept describing the possible exchange of means to pursue ends, and the exchange of ends to use available means. It displaces ancient perfection.

The computer and its networks bring data memories and information algorithms to bear on communication, taxing many established forms of communication, for instance organized and institutionalized communication in hierarchies of firms and offices or in asymmetries of hospitals and universities, for their ability to deal with them. Machines get 'out of control' (Kelly 1990), forcing communication to closely monitor, i.e., control itself with respect both to being tracked and to staying in step with procedure. The 'next society' emerges (Drucker 2003), which invents satisfaction instead of rationality, i.e., a reversible procedure instead of

a grand decision (Simon 1982), and form instead of equilibrium to be able to deal with known ignorance and thus with necessary exclusion.

### *Paroxysm*

Tribal society does not seem to have any notion of crisis. It does not need one since it would not know what to distinguish it from. Instead, it switches back and forth between different states of crisis as different states of society, which anyhow is always in a state of alert with respect to anything that might prove able to disrupt it.

Marcel Mauss' study in the social morphology of the Eskimo gives an example of this society with their own critical states of reproduction (Mauss 1979). The Eskimo know two states of their society, a summer state and a winter state. In winter they congregate in stations and endure the difficult months, especially toward the end from March to May, using up their stocks while watching their quality deteriorate. In summer they disperse, live in scattered tents, and go fishing and hunting.

Mauss describes the paroxysm in the winter months when the tribe is in an intensely collective mood. Any disruption by storms lasting too long, by the ice breaking, or by the seals disappearing is taken to be caused by a fault or by some behavior of the clan and is answered by shamanistic rituals engaging the whole clan in a religious arousal to make sure that everyone is in step with the situation.

That intensely collective mood and mode switches to a highly individualized mood and mode in summer. Religion becomes almost invisible, individuals are self-reliant, are able to make up their own mind, and belong to their family instead of their clan, which is in a way the mind of all of them in winter, and a different understanding of law now specifies what belongs to whom, with items of property being individually assigned. Mauss calls the summer state the atrophied and depressed state of society, thus making clear that what we today may regard as an unconcernedly normal state is a thoroughly critical state because the collectivity and its religious rituals, with the exception of some birth and death rituals, is lacking almost completely.

In winter Eskimo society is in a crisis preparing for summer, and in summer, preparing for winter. It is always negating itself, thus implying itself. It is oscillating. The prize being paid for this is evident, as Mauss shows by giving many examples of Eskimo society being unable to innovate. It is trapped by its oscillation, which amounts to a code whose negative value is the seasonal complement to its positive value. The seasonal distinction between summer and winter, together with its specifications of summer items and people and winter items and

people, provides a routine interpretation of an overall state of Eskimo society that identifies both summer and winter states as the respective crisis of winter and summer states. The breakdown of collective sociality in summer reflects the design of the winter state, whereas the breakdown of the provision of supplies in winter reflects the design of the summer state.

Thus, both states of crisis enable the Eskimo to adapt perfectly to their ecological and cultural environment. Both states draw boundaries to control who to talk to, when, and about what. The collective winter state is a comment of everybody about everybody else, culminating in specific nights of free sexual intercourse among all members of the clan, whereas the individualized summer state forces each family to be on its own and to come up with its own ideas of how to get along. Highly consequential, yet ritualized language in winter oscillates with rather individual or informal, yet inconsequential language in summer.

### *Decision*

The word 'crisis' appears with the Greeks. They call *krísis* the moment of uncertainty, suffering, and test, when the future is unknown, yet a decision has to be taken, for which there is not sufficient time for consideration (Koselleck 2006: 203-5). Examples are the decisions to be taken in warfare (Thucydides), in medicine (Hippocrates), or in court (Aristotle).

The crisis, which at the same time is no crisis but implies a society that is out there to step in and help out, adopts a new culture form. The decision is framed by drama, which means that it is both rare and important. In terms of ancient wisdom (Jullien 2004), any important decision is one to be avoided due to its unknown consequences. This turns the situation into a crisis. You have to take a decision you would rather avoid.

The crisis is marked by a pointed alternative like that of success vs. failure, of lawfulness vs. unlawfulness, of life vs. death, of salvation vs. damnation, and is thus considered to be final, irrevocable. Two of the most important features of ancient society thereby become visible, the belief in a cosmological and hence teleological order, which knows what is perfect and what corrupt, what is appropriate and what inappropriate, yet has to account for plans and strategies developed with reference to remembered pasts and envisioned futures. Such plans and strategies become possible through writing. They unbalance the former tribal order of almost complete presentness, framed by the distant past of the ancestors, which has been a secure lifeline to them. Crisis means that decisions are indeed possible which will change the course of things, yet that those decisions will in no way escape their fate of playing in vain to the teleological order that already is and will remain established.

The coding generated by crises in ancient society comes almost naturally. Breakdowns are to be expected in a society which considers corruption to be highly probable in a sublunar world full of passion, vanity, and hubris, and indeed looks to it as the affirmation of a design of cosmological order reigning nevertheless and awaiting the order's contemplation both by watching the calm passing of the stars and the wisdom of political rule. Thus, again, there is a rather narrow line between breakdown and design, enabling everybody to look at the former in terms of the latter: the coding becomes more apparent. It helps to attract the events that immunize the order of society against its states of disorder.

Another word for crisis is 'catastrophe,' either meaning destruction if a form provides for variables with little room for variance, or implying sudden change between two or more equally possible states of affairs (Thom 1983). Considered a catastrophe, a crisis in ancient society either leads to the destruction of what is already corrupt, or to a change between states, say, illness and health, or defeat and victory, that are equally consonant with the order of the cosmos. Crises and catastrophes bring the exceptional and singular back to normal, thereby -- since they are indeed happening -- confirming that the normal is not to be taken for granted. There is space for change, but let us not exaggerate. This seems to be the ancient message of a crisis.

Poets go a step further in their reflection. What if, or so Ovid seems to ask (Hughes 1997), a *metamorphosis*, due to the passion it unleashes, becomes undecidable with respect to its possible iteration, that is, with respect to either leading back to an appropriate form or leading forth to yet another, inappropriate one? Triggered by crises and catastrophes, metamorphoses reenter order and disorder into the distinction between order and disorder, up to the point that almost everything and almost nothing becomes possible.

Crises thus reveal themselves to be ambivalent calls to action such as to the fate no action can avoid. This is their culture form in ancient society.

### *Iteration*

Modern society is becoming so used to crises that it almost stops noticing when one ends and another begins. But some reference to final decisions, to a possible apocalyptic fate, even to a divine *judicium* continues to resonate with us (Koselleck 2006: 207-12), but the leading idea about crises is now that a crisis is an accelerated course of events, which somehow helps to restore a state of equilibrium (Burckhardt 1979). Equilibrium, however, is no longer defined with respect to some state of nature to be regained or some fate to be realized. Instead, it is embedded in an open-ended and rather unqualified history of either progress, for optimists, or

decadence, for pessimists. The pursuit of happiness or its complement, the melancholy of resignation, displace the ancients' search for appropriateness and justice. No crisis will alter the belief in happiness and wealth, either to be gained or lost forever. Any crisis helps to put the course of events back on track.

The code of breakdown, as distinguished from design, still works well even if design no longer refers to a divine order of things but to laws of history, on one hand, and some invisible supervisors of events about to tilt an equilibrium, on the other. Breakdowns refer to an as yet imperfect human nature, which still awaits its insights into the virtues of reason, while design stems from the guarantee that things can only become better, even if cultural critique weighs in against that optimism by pointing out that a majority of people will never live up to the expectations of reason, needing other forms of 'opium' instead.

Economists play an important role in developing an understanding of crisis, which does not change the possibility of an equilibrium to be restored and, by outlining the necessity to take some rather extraordinary decisions, helps to search for new resources to invest into the course of events. Crises, if they are overcome, help to unleash gains in productivity. They do so by making visible whose routines are running out of wisdom and whose ideas may lead a step further.

Again we may notice how a crisis calls upon society and lets it react against society, thus protecting it from itself. Yet its culture form is now up to the dynamic equilibria of modern society brought about by a printing press which swamps it with the possibility to criticize just about anything. 'Enlightenment' is the society challenged by its own crisis, with no other purpose in sight but the end of all prejudice, being somehow confused with the happiness of all.

Crises are iterations of a society in crisis. And crisis is society reflecting on itself to make sure how to reproduce. Progress and decadence are inevitable.

### *Switch*

Next society seems to continue, in a way, to normalize the polarization of the understanding of crisis. On one hand, the acceleration of possible runaway processes in the realms of demography and ecology becomes ever more apparent. On the other hand, crises are nothing more than indications of opportunities, either to switch away from them to recover ground elsewhere, or to switch over to them to gain from possible action. Possible breakdown is the element any project thrives on. Possible design is everything everybody seeks.

Switch means network. And network means that any footing of identity and any attempt to control are always in a state of crisis, i.e., anticipating possible if not imminent failure (White 1992, 1995). Next society's crises radicalize on modern society's crises and its search for the reversibility of irrevocable decisions. Yet, next society adds crises in technology to its repertoire. These are not just accidents as before. They are 'normal accidents' (Perrow 1984; Luhmann 1993) in that society participates in the risks they are exhibiting by setting up technology the way it does. This concerns high-risk technologies as much as (far too) extremely complex hardware and software in computers and their networks. Crises here become part of the design processes as well because only crises reveal what has been done so far. If a technology has not yet withstood a crisis, it has not really been tested. The same applies to the design of organizations, procedures, beliefs, marriages, or peer groups. Without being tested nobody knows what they are worth.

Any design becomes a design with respect to a possible network of identity and control. That is why switches are becoming so important. Modern society presumes that designs may be repaired, or networks overhauled, each with regard to a possible rationality of ends and means inherent in them. Next society does not believe in rationality anymore. Rationality is a state of affairs which is much too self-assured and thus insensitive toward changes of situation. Instead, designs and networks, or links and ties, are switched until they fit. And they fit, to be sure, just for the present situation, which, however, is the only place to start looking for further possible switches.

One may expect the notion of crisis to disappear because it has no specific information to it anymore. It literally does not make any difference. It remains important as a rhetorical device to broadly communicate an assumed necessity to act and call for the necessary resources. And it surely remains useful for invoking and activating a paroxysm of collectivity, grand decisions bound to hurt somebody, and even some distinctions in regime caused by just another iteration in social procedure. But these invocations and activations again do not boil down to crisis but indicate society itself.

Thus, next society's culture form of crisis is tantamount to the culture form of society, even to the form itself, if 'form' means a distinction in jeopardy all by itself, viz. by being drawn, by invoking an unmarked state which is excluded from the marked state, and by reentering the very distinction between marked state and unmarked state into the distinction, which thereby begins to oscillate in paradox.

We are looking at the immune system of society. It is about to absorb the rest of society. Whereas the enlightened society might still believe in latent structures somehow coming to the rescue of society if failures become manifest (Koselleck 1988), be it the powers of the

world sure to have their sway, technological progress hidden in unknown pipelines, or even a democratic consent materializing when danger becomes imminent, our monitoring of next society knows only of tracking and correlating. There is almost nothing we do not track and monitor, as galaxies, species, populations, payments, opinions, their corresponding oxygen states of blood circulation in the brain, and the occasional considerate thought going along with them, appear and disappear. A computational knowledge engine like Wolfram Alpha in the Internet is putting the data of the world at our fingertips ([www.wolframalpha.com/](http://www.wolframalpha.com/)).

All one needs to navigate this world of crises everywhere and nowhere is to know how to switch to which data, and which algorithm is able to put them together, and to draw the conclusion one might need.

### *Bubbles*

The series of economic and financial crises of the last fifteen years, beginning with the Internet bubble of the so called new economy in the late 1990s, is a case in point revealing the nature of crises in next society (Sornette 2003, 2009; Sornette/Woodard 2009). Crises are the tipping points when one bubble is revealed and substituted by the next one emerging. Crises signal to all other systems in society that they will have to adapt to a new situation, perhaps unleashing a crisis of their own in trying to do so.

Bubbles emerge when extreme behavior becomes probable (Sornette 2008). Extreme behavior is behavior which does not obey a Gaussian probability distribution any longer but instead follows power laws or Zipfian probability distributions (Zipf 1936; Simon 1955). Network effects or positive feedback make deviations from mean variance behavior all the more probable if there are embedded in overall uncertainties which induce an imitative behavior that in turn is the more robust the more possible rivalry it entails (Alchian 1950; Tarde 1962). So called regimes enforce themselves all the more convincingly as a feeling for and knowledge of alternatives diminishes and as the regime at hand offers enough fluctuation and flexibility for any social position involved to compete with others for bigger or smaller advantages.

That is to say that bubbles manage to work their own context (Zanette 2006). The more cooperation there is among people the more probable it becomes that critical situations turn super-critical by attracting more behavior which is correcting for minor deficiencies than behavior which seeks for exit strategies. Systems become metastable (Bak/Chen 1991) on their runaway to a catastrophe which brings about alternative states that nobody before was able to foresee and to enact. There seems to be a self-similar pattern emerging which repeats

the overall power law of a hyperbolic world population growth (von Foerster/Mora/Amiot 1960) for single areas of activities and experiences in politics and business, in sports and arts, in sciences and religion, which means that flocking in, herding, and facing breakdown together is a more attractive behavior than keeping distance, pursuing deviant projects, and opting for loose coupling. Whether there is an evolutionary reason in that self-similarity which consists in enabling us to watch in ever-different detail the processes involved and to possibly develop even an exit strategy, nobody knows and nobody is able to know because super-critical situations peak in singularities which are physically impossible to reach let alone to maintain. That is why the system is bound to try all kinds of behavior which help to break out of the path-dependence.

In financial markets we begin to opt for new risk management systems that account for Gaussian distributions not as the general but as a specific if not a rather improbable case, and for Zipfian distributions as another specific but more probable case (Malevergne/Sornette 2006). Other examples of modeling human behavior by the means of physical statistics help to gain a certain distance to the modern belief in the probability of what we prematurely in human society learned to call reasonable state of affairs and which turn out to actually owe more to Gauss than to Kant (Ball 2003, 2004). If Zipf gets the upper hand we better start to rethink sociological theory.

One of the concepts of a sociological theory which is up to the probability of extreme behavior may well be to think about crises as events helping to first hint to bubbles emerging and to then exit them. Crises thus are complex in the mathematical meaning of the word in that they are neither positive nor negative but "lateral" as the very Gauss we are trying to overcome proposed to call imaginary values (Nahin 1998: 82). They are not positive as indeed they do not define desirable states to stick with. Yet they are not negative either because they send strong signals where all weak signals were just enhancing an uncertainty inviting more of the same imitative behavior. They are imaginary or lateral in that they signal the breakdown of a situation which calls for fresh behavior instead of learned one to create a new possibly more sustainable situation. They are imaginary events in that they resist any definition of the situation possibly absorbing them.

We better get used to switching states, switching behaviors, and also switching experiences.

### Conclusion

We end up with a theory of crisis taking it as a complex variable of a social calculus. We did not go into the mathematical complexity of the variable, yet it may help in conclusion to just emphasize the three steps of the introduction and use of a complex variable in social calculus, as there are

$$(1) \textit{différance} \quad a := \boxed{a} \quad (C4)$$

$$(2) \textit{supplément} \quad a := \boxed{a}b \quad (C5)$$

$$(3) \textit{complexity} \quad a := \boxed{a}b \quad (C6)$$

Anything else would make one believe that *a* is *a* for everybody, at any time, in any situation. Yet *a* is in crisis. It is its own *différance* (Derrida 1982). It needs a *supplément* to contextualize it. Yet the context is a complex variable as well.

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