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## Are relational processes teleological or self-referential? What relational sociology can learn from systems theory

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### Abstract

This paper aims at expanding on François Dépelteau’s conception of social relation as dynamic processes. I argue that the basic concept of process is in need of further developments. We tend to understand processes as teleological, but I contend that self-referential processes are a more interesting model for relational sociology. Using Niklas Luhmann’s theory, we can conceive self-referential processes as systems that self-organise by transforming disorder into order. For this to be possible, systems must harbour within themselves. The paper then explores the various reasons that explain this special feature.

### Keywords

François Dépelteau, Niklas Luhmann, self-referential systems, order, disorder

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## ¿Son los procesos relacionales teleológicos o autorreferenciales? Lo que la sociología relacional puede aprender de la teoría de sistemas

### Resumen

En este artículo se pretende ampliar la concepción de François Dépelteau de la relación social como procesos dinámicos. Sostengo que el concepto básico de proceso debe desarrollarse más. Tendemos a entender los procesos como teleológicos, pero mantengo que los procesos autorreferenciales son un modelo más interesante para la sociología relacional. Haciendo uso de la teoría de Niklas Luhmann podemos concebir los procesos autorreferenciales como sistemas que se autoorganizan por medio de la transformación del desorden en orden. Para que esto sea posible, los sistemas deben albergarse dentro de sí mismos. En el artículo, además, se exploran las diversas razones que explican esta característica especial.

### Palabras clave

François Dépelteau, Niklas Luhmann, sistemas autorreferenciales, orden, desorden

## Introduction

This paper is inspired by many conversations I had with my late friend François Dépelteau. It aims at developing some of the ideas that I had in the wake of these conversations. The paper focuses on the concept of *process* around which François formulated the latest iteration on his vision of relational sociology (2018a, see also 2018b, 2015, 2008). While I understand the reasons François, along with other relational sociologists like Mustafa Emirbayer (1997), had for valuing the concept of process, this choice or decision does not entirely give me satisfaction. On one hand, “processes” are introduced as a way to push back against “substances”. Put differently, we speak of processes to remind ourselves that social reality is forever dynamic and never (or at least never completely) static. On the other hand, the concept of process is in turn burdened with certain ambiguities that have not been properly addressed as of yet. Namely, a distinction must be made between *teleological* processes and *self-referential* processes. I argue that the processes that best embody the ideals of relational sociology as François conceived it are self-referential processes. However, to make this point, I must take a detour through Niklas Luhmann’s systems theory.

I met François in person on multiple occasions through the Canadian Sociological Association’s (CSA) annual meetings. Our acquaintance began officially in 2014, when we had dinner together after I presented a paper on a panel organised by François and Chris Powell (although I should say for the record that François and I had already crossed paths once the year before). In the following years – from 2015 to 2017 – François and I launched a research cluster on relational sociology under CSA’s umbrella and we created more panels on relational sociology through the same organisation (also for the record, I should add that credit must go

to François for most, if not all, of these initiatives). Since I had a chance to work closely with François, it was easy to observe how dedicated he was to John Dewey’s and Arthur Bentley’s threefold distinction between self-action, interaction and transaction (1989 [1949], see also Morgner 2020a). Part of the attraction was probably the economy or parsimony of this distinction: with three words only, François could communicate elegantly both the project he wanted to promote and the counter-projects he wanted to resist (or at least stay away from).

Self-action and interaction imply a form of substantialism whereby the properties of social actors engaged in relation with other actors are simply pre-given and therefore taken for granted. By the same token, relations remain secondary to social actors. The remedy is transaction as the true form (or a deeper form) of processualism or processual thinking. Actors are shaped – that is, defined – by the relation they maintain with other actors. We can think of actors as algebraic variables that can take on different values, whereas the relation between actors would be the equivalent of the mathematical equation holding these variables together. Thus, one cannot change the value of one variable without changing the value of the others. In the same way, the properties of one actor are tied to the properties of the other actors at the same moment in time (we must add though that the mathematical equation cannot be admitted as an extra term in addition to the variables tied together: the equation merely reflects the relation between actors and the way this relation comes to evolve in time).

I can report that listening to François convinced me to take my distance with critical realism. While I initially found the concept of emergence an interesting option to account for the reality of social structures, François helped me to understand that inter-action (or co-determinism) is ultimately a position plagued with contradiction (Dépelteau 2018a: 507, and also Dépelteau 2008). In place of

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Margaret Archer, François recommended that I read Anthony King. The main lesson was this: structures do not constrain actors; only other actors can constrain actors (human or nonhuman).

When I joined forces with François back in 2014, I was very much invested in Niklas Luhmann's systems theory and I still am today (Luhmann 1995, 2002, 2012, 2013a, 2013b). It occurred to me that the sort of sociology that François was envisioning was in many ways compatible with Luhmann's own approach to social systems (Guy 2018a, 2018b, 2019). I had a chance to talk about this with François more than once and I have reasons to believe that François was progressively warming to Luhmann's ideas, although I do not think he had the time to read and learn more about them (I also suspect that François would have greatly disliked Luhmann's heavy style of writing).

This is where François and I had to leave things unexpectedly – and this is where I want to pick them up today. That is, following the pattern that sank in between François and me, I will be talking about systems theory as a way to respond to François' dream of a relational sociology. For my intervention, I will move away from the confrontation between processes and substances to open up a distinction among processes. I will point out that we can think of processes as either teleological or self-referential. Self-referential processes are the more interesting option for relational sociology. Yet the conceptualising of self-referential processes (or systems, as Luhmann will have it) raises certain theoretical challenges. I seek to address these challenges in this paper. But first I must clarify why teleological processes make for the inferior or less interesting model.

For François, talking in processual terms was essential to ground the dynamic, lived and therefore temporal character of social relations. This is fine, except that the word "process" suggests other things nonetheless. For instance, when envisioning processes, one is tempted to imagine a transformation going from an initial state to a final state. Think of boiling water: in the beginning, the water is not boiling; later on, once the temperature of the liquid has finally reached 100 degrees Celsius, it starts to boil. I suspect that François would have probably rejected this example, but I contend nonetheless that most commentators would admit that boiling is a valid illustration of what a "process" is supposed to be in principle. What causes confusion is that boiling water clearly implies a beginning and an end. It is that following moment that defines the process retrospectively for what it is (as opposed to any other processes, like freezing). This is potentially misleading because the processual thinking that François and other relational sociologists advocate *needs not* imply such teleological projections.

In Luhmann's systems theory, we find an aspiration similar to that of relational sociology, to repeat again. The difference is that Luhmann's theory is not built on process or relation as magic operator (to say it like Vandenberghe – 2018). Luhmann's theory is therefore helpful in safeguarding processual thinking

from teleological thinking. Most significant is the notion of self-reference. For Luhmann, social systems are self-referential systems. Unlike processes like boiling water, social systems are not posed between an initial state and a final state. This is to say that social systems are not moving toward a definite outcome located in the future and yet known ahead of time (like, say, equilibrium, adaptation, growth or even justice and a more humane world). In time, social systems just continue to react to themselves in a recursive fashion. What Luhmann designates as a system is not a fixed arrangement of solid parts, a "form" that ought to be preserved or held stable. For Luhmann, there is a system inasmuch as a first series or wave of actions-reactions leads to another wave of actions-reactions, and another, and another, etc. Each round is meant to bring about another round, thus keeping the system "alive" for another moment, and another, etc. In this way, a boundary coalesces, setting the system apart from anything else around it without ever keeping the system tied to unchangeable conditions.

To better understand self-referential systems, it is useful to examine the distinction between order and disorder. Mainstream sociologists are already familiar with these concepts. At least since Talcott Parsons (who himself referred to Thomas Hobbes), it is common practice to speak of social life in terms of collective order to underscore the regularity and the predictability of social activities in most situations. This order is usually understood as grounded in cultural beliefs (Durkheim) or imbued with legitimacy (Weber). Accordingly, disorder is associated with moments of conflict or periods of crisis when regularity and predictability fall apart because social actors no longer agree on the same set of values or the right course of action. Without downplaying these variables, Luhmann deviates from mainstream sociology by redefining order and disorder in formal terms. Order does not coincide with what is good or desirable, and disorder, with what is bad or undesirable. Rather they indicate levels or degrees of organisation, e.g. whether activities are tightly or loosely organised. These parameters induce various effects whenever a system comes to face a new situation. The system then reacts by altering its inner organisational features. In sum, social systems are self-organising systems and self-organisation is the process whereby a system's internal order and disorder are periodically reshuffled.

To continue exploring the concept of self-reference and ultimately to preserve relational sociology from the lure of teleological thinking, the rest of the article reconstructs the interplay between order and disorder in three steps. For the sake of the discussion though, I give priority to the concept of disorder. This choice is justified by the fact that it is disorder that allows a social system to transform itself by substituting for its internal order another order. In other words, there is more activity on the disorder side than on the order side. Once properly qualified, disorder must be readmitted as a positive force by the same token.

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It is therefore strategic to focus on disorder as entry point. I will therefore talk about (1) disorder and the formation of observing systems, (2) disorder and the question of meaning, and (3) disorder and the interplay between expectations and surprises. But first, let me begin by taking a brief detour through the ideas of British anthropologist and cybernetic thinker Gregory Bateson to identify the main points that I will develop in the other three sections.

## Can disorder be positive? Lessons from Gregory Bateson

Gregory Bateson was a member of the second-order cybernetics movement, which had a great influence on Luhmann (Guy 2018b). He wrote about multiple topics (from play to alcoholism to Bertrand Russell's theory of logical types) across multiple disciplines (from anthropology to psychiatry to biology). At times, he expressed his core ideas by writing simple conversations between a nameless father and his daughter (note: Bateson had a daughter in real life) (Bateson 1972). One of these dialogues is illuminating for our own topic. The daughter asks her father (and this is the title of the piece): "Why do things get in a muddle?" The protagonists first establish a distinction between tidy and muddled (or untidy). From there, their exchanges unfold like this:

F: [...] Now—let's look at what *you* call tidy. When your paint box is put in a tidy place, where is it?

D: Here on the end of this shelf.

F: Okay—now if it were anywhere else?

D: No, that would not be tidy.

F: What about the other end of the shelf, here? Like this?

D: No that's not where it belongs, and anyhow it would have to be *straight*, not all crooked the way you put it.

F: Oh—in the right place *and* straight.

D: Yes.

F: Well, that means that there are only very few places which are "tidy" for your paint box—

D: Only *one* place—

F: No—very *few* places, because if I move it a little bit, like this, it is still tidy.

D: All right—but very, very few places.

F: All right, very, very few places. Now what about the teddy bear and your doll, and the Wizard of Oz and your sweater, and your shoes? It's the same for all the things, isn't it, that each thing has only a very, very few places which are "tidy" for that thing?

D: Yes, Daddy—but the Wizard of Oz could be anywhere on that shelf. And Daddy—do you know what I hate, hate it when my books get all mixed up with your books and Mummy's books.

F: Yes, I know. (Pause)

D: Daddy, you didn't finish. Why do my things get the way I say isn't tidy?

F: I have finished—it's just because there are more ways which you call "untidy" than there are ways which you call "tidy." (Bateson 1972: 4-5)

We can take the distinction between tidy and muddled to be equivalent to the distinction between order and disorder. Bateson thus gives us a first fun and intuitive understanding of the issue at hand. At this stage though, disorder still appears in a negative light since it is associated with situations where "matter falls out of place", to put it like Mary Douglas (2002). But there is more.

Bateson calls these father-and-daughter dialogues "metalogues". He explains: "A metalogue is a conversation about some problematic subject. This conversation should be such that not only do the participants discuss the problem but the structure of the conversation as a whole is also relevant to the same subject" (Bateson 1972: 1). In other words, the structure of a metalogue is self-referential, hence the prefix meta.

Indeed, if you pay attention to Bateson's entire text, you quickly realise that the conversation regularly gets in a muddle and that the protagonists find themselves having to tidy things up over and over again – the "things" being here the same conversation that they are in. By now, disorder already begins to take on a more positive meaning in that it is given a more positive role: that of stimulating and sustaining the inter-action (i.e. the social system) from within. To be sure, the muddling arising in the course of the conversation is a source of frustration for the participants more often than not. The point however is that such muddling keeps the system *going*. What is positive about conditions of disorder is this operational effect. Luhmann built his whole theory around the same basic principle.

The system keeps going whenever one participant rejects what the other is saying, or whenever they reflect on what they said earlier, or whenever they update their objectives or criteria on the basis of their latest insights, etc. The participants never completely agree or disagree with each other. For instance, the father first agrees to answer the daughter's question, but then the daughter disagrees with or questions the way he frames the problem. Keeping the system going means determining at each moment what is "appropriate" or "required" under the circumstances considering the immediate priorities. Because words are slippery, this sometimes requires reinterpreting the same priorities in alternative ways, thereby changing the course of the conversation unexpectedly. Intuitively, we are reminded of the Beatles when they sang:

You say yes, I say no

You say stop and I say go go go, oh no

(...)

I say high, you say low

You say why and I say I don't know, oh no

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Note that this kind of disorder arising in the context of social interaction is truly internal in origin. The conversation is not merely disrupted by external events (like, say, a fire in the house). Nor is disorder limited to personal interruptions. When the daughter objects to what her father is saying, we have to realise that she is still holding on to the chain of arguments thus far. She is still very much involved in the conversation and she is pointing back to it as she is pressuring her father. Only in this way can the daughter hope to exercise any pressure at all. In sum, the presence of disorder (muddling) does not rest on alien variables (like, say, bad weather), but is integral to the activity of conversing. All conversations – and by extension all social interactions and thereby all social systems – are inevitably self-muddling.

However, social systems do not simply continue to slide toward increasing entropy, because disorder can be transformed into order. Participants can clarify what must be clarified and decide what must be decided (until further notice). This leads to another interesting point: the mechanism whereby disorder is transformed into order seems to owe more to the former than the latter. In their yin-yang complementarity, it is disorder that turns out to be the active principle, and order, the passive one. In effect, the efforts made at eliminating or reducing disorder are triggered by the same disorder. Order emerges as a temporary side effect of this. Order does not mark the end of disorder, but only the latest direction that the system has taken.

Alternatively, we can imagine order and disorder as forming a pair of covariables that gets to be periodically updated, so that change in the social system implies a change in both values simultaneously. At time  $x$ , we have a first pair of order and disorder. At that moment, disorder spurs the system to “tidy up things”. The system proceeds by readjusting its current order. We then move from time  $x$  to time  $x+1$ . At that next moment, we observe a new pair of order and disorder: on one side, we have the new order that the system just turned into; on the other side, we have the new potential disorder that matches it. The system is capable of continuous self-renewal because disorder is continuously self-renewing.

In summary, disorder can be seen as positive in that it contributes directly to the evolution of social systems. To be fair, the concept of disorder does not entirely lose its aura of negativity, since total control escapes the protagonists. But total control and evolution do not always go hand in hand. On the contrary, Luhmann argues that for social systems to evolve at all – that is, to be able to adapt to unforeseen turns of events – they must incorporate a part of disorder, which in turn allows for not total but partial control at least (conversely, partial control leaves room for a part of disorder). Indeed, they *must*, Luhmann is telling us. That is, they could *not exist* any other way, or at least not as the kind of social systems Luhmann contends they are.

The next three sections aim at explaining why according to Luhmann there can be no social system that is not partially disorganised by definition.

## Disorder and the formation of observing systems

Luhmann's theory is certainly monumental. As a beginner, where should one begin? Or perhaps more to the point, why should one begin at all, knowing that the task of reading Luhmann for the first time will be time-consuming to say the least? If a pre-emptive defence is in order, it is worth stating that Luhmann himself begins with what it means to observe the world. This is a fundamental question that anybody can appreciate, whether they are trained as sociologists or not. It is easy to miss it though. To clarify what the stakes are, it is convenient to begin with a critique of determinism.

Broadly speaking, determinism is the position that the world is governed by universal natural laws (Prigogine 1997, Prigogine & Stengers 1992, 2017). While these laws account for the phenomena we can observe around us, the laws themselves remain beyond change: they are eternal. Accordingly, the same causes always produce the same effects. This vision of the world as completely deterministic translates into an equally deterministic vision of knowledge. To know is to know with certainty. The certainty of knowledge originates in the certainty of the laws of nature. Any lingering uncertainty must be attributed to the observer as opposed to the world, since the latter admits none in its design. Logically, any uncertainty must spring from a lack of some kind: for example, lack of measurements and testing as well as lack of adequate tools or technology to run the required testing, but perhaps more importantly lack of intelligence or lack of imagination on the part of the observer, and sometimes lack of scientific rigour as in cases of ideological biases and dishonesty.

However, determinism as a philosophical position creates some blind spots and therefore raises some problems. I name two. First, as pointed out by chaos theorists (Prigogine 1997, Prigogine & Stengers 1992, 2017), determinism does not do justice to the irreversibility of time. In a deterministic universe, there may be an arrow of time going from past to future, but the laws of nature are such that everything can happen in reverse, with effects reverting into their causes. Visualise a ball rolling on a snooker table until it hits another ball: we can play the same sequence from end to beginning without losing or altering anything. Determinism is limited in that it cannot account for all these other instances when past and future are no longer reverse symmetrical images of each other. This is what the notion of irreversibility implies: that things change so much so that past and future can no longer be kept under the same natural laws.

A second problem revolves around the status of the observer (Maturana & Varela 1972, Bunnell 2004). If the universe is completely deterministic, so much so that any uncertainty falls “outside of it” on the side of the observer, then the observer disappears out of view. In this schema, we associate observing with the exercise of objectivity. Since achieving objectivity is meant

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to coincide with the discovery and understanding of the laws of nature, then the production of knowledge corresponds at the same time with the (self-)erasure of the observer (Bunnell 2004). However, erasing the observer is not a good explanation for what it means to observe anything. The observer sees the determinism of nature's law and yet he or she remains incapable of seeing his or her own seeing as a concrete activity. At best, we can understand the observer as a margin of error that should shrink down to zero following an asymptotic progression. In a totally deterministic universe, there can be no observer because there is nothing that could enable the observer to emerge at all, since the irreversibility of time is missing anyway.

The second problem connects back with the first one and we can now put together an alternative to determinism. The core issue is this: what we designate as an observer is not a disincarnate entity that could assume God's position by taking a view from nowhere (Nagel 1986). This is not to dismiss any scientific observations as fraught with subjective judgements (or as good as anybody's opinion), but to turn observation into an object of science (Fuchs 2001). Observation begins with an observer, while any observer must exist as an actual assemblage. The properties of this assemblage make for the parameters of observation. Think about the difference (and relation) between what you can see with your eyes and the physiology of your eyes as organs.

This line of reasoning forces us to revise our parallel understanding of "the world". The world is no longer a single compound that would precede the birth of any observer. Rather the world is recreated with each new observer stepping into action. This is no matter of fancy, as if each observer were free to rearrange the world at will (Luhmann 2002: 127). Each observer produces a world for himself or herself (or itself) as a function of its inner organisation. Granted, an observer can change the world by changing the way he or she (or it) observes it, but in order to pull up this trick the observer must transform himself or herself (or itself) at the same time on a structural level.

A science of observation would dissect any observer to figure out what an observer's own structure makes him or her (or it) capable of observing (Fuchs 2001). This echoes chaos theorists like Prigogine who insists that new structures emerge by way of bifurcation in conditions far from equilibrium. It is through mechanisms like these that what we designate as observers come into existence as assemblages of their own. In turn, this echoes Luhmann's theory. Luhmann contends that social systems are observing systems. Under the circumstances, the status of observer is therefore not restricted to humans, individuals, persons, minds, brains or organisms. By identifying the conditions that are required for social systems to operate as observers of their own, we will also understand why (partial) disorder is integral to their functioning.

To begin with, for social systems, observation is not a secondary activity that could be turned on and off while attending to more immediately pressing matters. To be in a functioning state, a

social system must be observing at all times. If the system is not processing any information, then the system is dead. This business of processing information is nothing passive, as if the system only had to wait for something to happen in its environment to be impressed by it. While the system exists in an environment, it must also distinguish itself from that environment. For the system to distinguish itself, it has to be capable of *organising its own activities, starting with observing*.

Indeed, the crux of our problem lies in the achievement of autonomy. One could say that the system has to break off with the cycles and rhythms, the flows and patterns already prevailing in the environment by coming up with its own melody, by humming its own refrain (Deleuze and Guattari 1988). Music analogies are limited though: we do not mean to suggest that a system infinitely repeats itself (most songs are fairly short and the systems that Luhmann talks about easily outlive them), but that the emergence of a system in an environment implies a split between these two. The system ought to be different from the rest of its environment or else it does not exist as a separated system. The same principle applies to the observations carried on by the system, since observing is a concrete activity that must be organised concretely within the same system. To put it redundantly, everything the system observes about its environment is observed by the system. Thus, there is a difference between the environment as it is, on one side, and the observation of the environment as done by the system, on the other side. As it turns out, our human eye only perceives very limited wavelengths along the light spectrum. It leaves out ultraviolet and infrared light; they never appear to us and we go on with our normal business, assuming that they are simply inexistent.

If the observations carried on by a system depend on that system's internal organisation, then the knowledge produced by way of observing is a matter of adaptation rather than representation, or fitness rather than faithfulness. In other words, the knowledge generated within a system with the means of that system's operation does not depict the world as a whole – as if the world is indeed one all-encompassing and eternal whole (see earlier comments) and as if all other systems had to agree on exactly the same representation – but fits within that one ecological niche that the system manages to occupy for now (Fuchs 2001).

As a matter of adaptation, knowledge production is a continuous and sustained achievement. The system cannot engage in observation just once, by taking a single snapshot and working with it and nothing else from there on. It is as though the system produces one observation to force itself to produce another one so as to validate or invalidate the first one. Like consciousness, observation and perception (and cognition) are best understood as running streams. Through observing, the system does not scan the entire environment, but rather monitors its own activities, if only because the system can generate multiple observations

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at the same time and compare them with one another. This is how the system can establish itself as a closed circuit and achieve autonomy from the environment in the form of operational closure (Luhmann 2013a).

Let the reader take note that the epistemological model or sketch we have assembled so far directly resonates with the ideas set forth by Dewey and Bentley in *Knowing and The Known* (1989 [1949]). The relations or transactions that actors participate in depend on the perception that the said actors have of the same relations. The perception of a relation is therefore a factor in determining the subsequent trajectory or development of that relation. This makes for an Ouroboros-like (circular) mechanism since a change in the relation will enable a change in the perception of the relation, which will then enable a change in the relation, and so on and so forth (Dépelteau 2018a: 509, 513, Morgner 2020b: 15). In sum, acting and knowing are not cut off from each other.

Now then, how does disorder enter the picture? So far, we have established that determinism leaves us blind to the constitution of observers as immanent phenomena. Moreover, we have established that the said observers must operate in a circular (self-referential) manner for them to gain and maintain their independence from their environment. This circular character implies that systems remain in part indeterminate or uncertain so that they can continue to react to themselves.

We have to recognise that systems are never at rest. Each system is a chain of operations, each one of them precipitating more operations, thus extending the system's existence as a chain of operations. There is no operation a system can produce that could be "the operation to end all operations". Ending the chain of operations would entail ending the system itself. Accordingly, while the system succeeds in reproducing itself, it can only do so by reproducing its share of uncertainty or disorder by the same stroke. The system must always follow up on its own operations. For this reason, we can imagine a system as though it is always missing a part of itself, something yet to come, if only in the very short term, like the answer to a question for instance. It is this state of affairs that propels the system forward, that motivates the system to keep on producing more operations. In light of this, we can speak of the system's internal disorder to describe the fact that the system is forever in need of self-confirmation.

## Disorder and the question of meaning

We can formulate the main conclusion we have reached so far as follows: in Luhmann's view, social systems are capable of self-organising because they are simultaneously self-destabilising and even self-disintegrating (Luhmann 1995: 48). Keep in mind that, in Luhmann's theory, what we designate as the system's elements are not objects (animate or inanimate), but operations which happen in an instant. The system produces operations and manages to

secure its own reproduction out of the products of its operations if, among the said products, there is the need or the compulsion to produce still more operations (ibid.: 49). All along, operations exist as events only, so that the whole system maintains itself in a perpetual transient state.

Luhmann writes:

Systems with temporalized complexity have properties that one cannot find on their underlying levels of reality. They compel themselves to change their states constantly to minimize the duration of the elements that compose them. Thus, viewed temporally, they combine stability and instability and, viewed factually, determinacy and indeterminacy. Every element (event, action, etc.) is then *determinate and indeterminate at the same time*: determinate in its momentary actuality and indeterminate in its connectivity (which must, however, also be actualized in the moment) (ibid.: 49).

Turning to Luhmann's concept of meaning will provide additional details to this picture. Breaking with Weberian interpretative sociology, Luhmann redefines meaning as the medium for the operations of social systems (note: meaning is also the medium for the operations of psychic systems – i.e. consciousness – but I will omit this part of Luhmann's theory for the sake of simplicity). Actual physical media include light and air (Heider 2017). What the human eye sees is not light, but light reflection. What the human ear hears is not air, but the sound waves carried by air or travelling across it. While light and air enable optic and sonic perceptions respectively, they remain undetected or unnoticed for what they are. Moreover, light and air cannot be limited to what we happen to see or hear right now. Accordingly, the definition of a medium is not tied to a particular content. Following this model, Luhmann suggests that meaning enables the operations of social systems without ever being exhausted by them. The operations of social systems carry meaning or are accepted as meaningful, but the local significations that are determined through these operations are not to be confused with meaning as the medium that provides affordance for the same operations and more.

One important consequence for sociology is that meaning is no longer a projection of the human mind. Meaning no longer originates from individuals in the form of opinions or beliefs (or sublimated instinctual drives), nor is meaning located or contained in people's heads as mental stuff. If we were to ask, "what is the meaning of *this*?" – like, say, "what is the meaning of life?" – Luhmann himself would not indicate a direct answer. He would point out however that, unless one is merely talking to oneself in one's own mind, addressing and handling such a question must occur as an actual event amid ongoing coordination efforts between two individuals or more. That is, it can only occur as an operation inside a social system (like an ordinary conversation between father and daughter for instance). For this to be possible,

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a wider set of options must be available for selection purposes. When talking about meaning as a medium, Luhmann is directing our attention to this wider set that makes selecting possible without shrinking down to any one of these options or imposing one at the expense of the others. The structure of meaning is that of a phenomenological horizon. Options made available in the course of a system's operations appear in front of that background and against it while pointing out to each other. Within that horizon, the meaningfulness of the options lies in their mutual distinctions.

For example, we know the difference between winning and losing. For winning to be possible, losing must be possible at the same time. Information finds its source in the distinction between the two possibilities, so that any option carries with it the entire set that it depends on. This is what a *second-order* approach reveals, when we look at the observer as a system and when we examine the structure allowing that system to produce the observations that it does. That said, we must not forget to return to a *first-order* approach and re-discover what the system's observations feel like for the system. Surely, winning is exhilarating for the winners! This is to say that when the system releases an observation for its own consumption, the system is then completely absorbed by it. This is how observation becomes the present reality for the system. What else can a system come to know about itself and its environment but the observations that it produces internally? How else can a system know anything? Thus, from a first-order perspective, the event of winning and the feeling of winning are coterminous for the systems producing that observation (note: if the winners happen to be the opposite team, this is simply compounded in the observation, thus making for the feeling appropriate to such circumstances).

An observer therefore loses itself in its stream of observations – until the stream of observations turns into something else. This is where disorder resurfaces again, not because the system proceeds with its observations in a completely random manner, but because there is a chance for any observation to be contradicted by subsequent observations. What is observed as reality becomes real for the system by virtue of the system's inner functioning, i.e. by virtue of the fact that the said observation occurred as an operation in that system. From this point, the system continues by producing still more observations so as to confront its own observations with even more observations. The system is perpetually testing itself. Through this strategy, the system can oscillate around its own axis, as it were, whenever older observations are updated in light of newer observations. From a first-order perspective, this means that the reality registered by the system changes into a different one: one continues to win – the same event continues to stretch as the same present moment – until one no longer does.

Luhmann sums up:

The system is formed out of unstable elements, which endure for a short time or even, like actions, have no duration of their own but pass away in their very coming to be. Viewed

chronologically, every element, of course, takes up a certain amount of clock time. But the system itself determines the length of time during which an element is created as a unity that cannot be further dissolved; that period has a conferred, not an ontological character. Accordingly, an adequately stable system is composed of unstable elements. It owes its stability to itself, not to its elements; it constructs itself upon a foundation that is entirely not "there," and this is precisely the sense in which it is autopoietic (1995: 47-48).

The idea is that meaning makes for a saturating experience, as it were, until your first meaningful experience is displaced by another meaningful experience. While your second experience gives you hindsight on your first experience, that second experience proves to be just as saturating in that it submerges you just like the first one did, so much so that it literally becomes the present you are living at that moment. Disorder therefore reappears in the picture in that one always has to *wait and see* how things will turn out to be. Any confirmation is never the last, only the latest one, so that things remain forever in suspension, like in the proverbial tale about a boy, a horse and a Zen master. In the movie *Wilson's War* (2007, directed by Mike Nichols), there is a scene where the main characters (played by Philip Seymour Hoffman and Tom Hanks) retell the story:

Gust Avrakotos: There's a little boy and on his 14th birthday he gets a horse... and everybody in the village says, "How wonderful. The boy got a horse." And the Zen master says, "We'll see." Two years later, the boy falls off the horse, breaks his leg, and everyone in the village says, "How terrible." And the Zen master says, "We'll see." Then, a war breaks out and all the young men have to go off and fight... except the boy can't cause his legs [are] all messed up. And everybody in the village says, "How wonderful."

Charlie Wilson: Now the Zen master says, "We'll see."

Anthony Giddens once aptly remarked that most sociologists managed to integrate time in their description of social existence only in the form of change (1979). For them, social existence displays a very high level of stability, so much so that change remains exceptional. Life in society is regulated or programmed with the precision of a Swiss clock, where every single piece fits with all the other pieces. For change to occur at all, everything must change at once. Clearly, Luhmann deviates from this creed. Change is not so rare that only political revolutions (and successful ones at that) are deemed worthy of the title. For Luhmann, change occurs frequently, if only as small local variations. The system constantly basks in these variations made possible by the environment. The system does not stand as the opposite to these disturbances, but feeds on them to sustain itself. In fact, in place of the classical dichotomy between stability and change (or continuity and discontinuity) scorned by Giddens, Luhmann raises another



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question: which changes to accept and which ones to reject? This leads us to our next section.

## Disorder and the interplay of expectations and surprises

At this point, Luhmann's ideas about social systems coalesce into a theory of surprises (surprise!). This is not to say that Luhmann can accurately predict surprises – if so, there would no longer be surprises – but that his theory can identify the social conditions that surprises as phenomena of their own depend on. In turn, this provides additional precision about the place and role of disorder in the way social systems operate.

Social systems not only manage to reproduce themselves, as we explained in the previous sections. In addition, they also manage to evolve. When it comes to social systems in particular, evolution implies the selection and retention of expectations (Luhmann 1995). In Bateson's metalogue, the conversation going on between father and daughter does not shrink down to the ideas expressed among them. At the same time, the conversation amounts to a self-contained situation. For instance, the conversation is recognised as "serious". The participants are not merely goofing around and joking about. Once again, that agreement or convention regarding the nature or purpose of the activity at hand is determined in the course of the same activity. Luhmann introduces the concept of expectation to account for this sort of development.

Once acquired, expectations bring stability in social interactions because you can then anticipate (i.e. expect) what others expect from you (Luhmann 1995: 303). Among other things, the selection of expectations in social contexts coincides in practice with the definition of roles. Other examples include the development of programmes as sequences of actions or steps for individuals to follow while playing along the role given to them. On a more general level, expectations also come in the form of values providing justification for specific programmes. At the other extreme, expectations finally congeal around persons, i.e. what people get to know you for as one individual: your personality, your style, your track record, your reputation, etc. (on the concept of roles, programmes, values and persons, see Luhmann 1995: 315-318).

Note that a difference remains between expectation and behaviour. The expectations that are cultivated in social systems result from the efforts made by multiple individuals to coordinate themselves with each other and maintain predictability. Yet the creation or selection of these expectations does not strictly bind the individuals participating in the operations of social systems. Put differently, while expectations enable anticipation – so that one can hope to trigger reaction X by doing Y – individuals can still deviate from them either by choice or by accident. Whatever

the cause may be (and this depends on the other individuals observing the deviant after the fact), it forces the system to react again. Except this time the problem does not lie in the complete absence of expectations (which makes an overwhelming situation for the participants, since they cannot tell what will happen). Now the challenge is to decide what to do with the set of expectations that has prevailed until then.

In other words, we speak of surprise when the operation produced by a social system is not in line with what the same system has led us to expect up to this point. The experience of surprise lies in its contrast with ongoing expectations. Accordingly, there can be no surprise without expectations. The concept of surprise is therefore useful to operationalise the concept of disorder in social systems. When faced with surprises, social systems are called to revise their expectations, as mentioned just now. Luhmann describes two possible strategies: either learning or enforcing norms (Luhmann 1995: 320-321).

To learn means to change. New events call for new expectations. The latest developments show that we have been holding on to the wrong expectations and/or that we can no longer hold on to the same old expectations. At this point, it becomes clear that we have misled ourselves. The smart thing to do is to abandon these old expectations and start experimenting again. The opposite strategy is to refuse to change by rejecting the latest developments as inappropriate or inadequate anyway. There is no problem with the set of expectations previously selected. If there is any problem, it is with this surprise that proves to be a bad one or an unacceptable one. We therefore reassert our expectations and protect them against change. What the concept of norms implies is exactly this: we do not revise expectations when the world proves us wrong, rather we resist the world by defending our expectations against it.

The word "learning" has presumably a positive ring to it, while Luhmann's treatment of norms may suggest something stubborn or unreasonable, perhaps even dangerous (as with religious fundamentalism). Luhmann is not trying to elevate one over the other. He merely identifies the different mechanisms whereby a social system comes to evolve and develop itself. A system that would change constantly would never grow in complexity in that it would never secure a basic structure as a foundation to build on. At the other end, a system that would never change would undermine its capacity to adapt so as to survive. Social systems that continue to thrive over time engage in both strategies simultaneously: learning as much as norm enforcement.

At this point, it becomes quite clear how Luhmann's systems theory overlaps with François Dépelteau's project of relational sociology. About two actors designated as A and B, François wrote: "A is what it is and does what it does because A interacts [i.e. transacts] with B, and viceversa" (Dépelteau 2018a: 513). He thus insisted that social actors are interdependent and coproducers of their reciprocal relations (or social fields). Even though he wished

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to avoid projecting a difference between a micro level and a macro level, François nonetheless produced formulations that suggest a bottom-up movement: from the actors to the relations encompassing them all. By contrast, Luhmann seems to privilege a top-down approach: from the encompassing relation to the actors involved in them (although this is not exactly accurate either). Ultimately though, when Luhmann accounts for the creation of expectations whereby persons, roles, programmes and values come to be defined through the operations of social systems (without foreclosing the possibility of revising the said expectations afterwards), what he is suggesting strongly echoes François' own proposals.

## Conclusion

Would François Dépelteau have ever embraced Luhmann's systems theory as an expression or a version of his vision of relational sociology? I cannot be completely sure because I continue to think that François would have been probably turned off by Luhmann's uncompromising and unflinching theoretical apparatus. Nevertheless, I also continue to think that François' deep relationalism is strongly reminiscent of Luhmann's radical constructivism. It is to better enlighten this connection that I introduced in this article a distinction between teleological process and self-referential process.

Indeed, I contend that the concept of process causes some difficulties in that it tends to force us to assume some sort of teleology, with a clear beginning and a simple end, as in the case of boiling water. But this teleological requirement makes for processes that are all too rigid and reductive, which then runs counter to the hopes of relational sociology (or relational galaxy). Alternatively, one can take advantage of the concept of self-reference as operationalised by Luhmann in his systems theory. Relational processes can then be remodelled as self-referential systems. Rather than being "caught" between an initial state and a final state, self-referential systems are constantly reacting to the disorder that they trigger themselves. Self-referential systems continue to reproduce themselves and to evolve by transforming this disorder into order.

While systems are busy transforming the disorder internal to them, they can never completely eradicate it because they themselves can only exist in a state of partial disorganisation. That peculiar condition is due to the fact that (a) social systems must achieve autonomy from their environment so as to generate their own observations, (b) the ongoing operations of a system can be reversed by the subsequent operations of that same system, as indicated by Luhmann's concept of meaning, and (c) systems allow for the development of expectations, which in turn allows for surprises.

In a way, this article is a metalogue in its own right (see Bateson). That is, it is a reaction to a certain ambiguity that has

been arising along with the focus on processual thinking within relational sociology. Hence, the objective was to clarify this issue – the difference between teleological process and self-referential process – and redirect the course of the conversation (and thereby assuming the risk of triggering new ambiguities hereafter). Disorder has been transformed into order – at least, for now – so that, as in life, the system can go on with its operations.

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Jean-Sébastien Guy is a sociologist interested in sociological theory in general, whether classical (Durkheim, Marx, Simmel, Weber) or contemporary (Bourdieu, Foucault, Giddens, Luhmann) or anything in between (Garfinkel, Goffman, Lévi-Strauss, Parsons) or even off to the side (Deleuze, Wittgenstein). Rather than studying theory through an author's life or context, Dr. Guy approaches theory as revolving around a set of abstract problems, including central oppositions like individual/society, micro/macro, structure/agency, continuity/change, order/disorder, modernity/tradition, power/freedom, and so on.

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