On the Ontological Status of Mechanisms and Processes in the Social World

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Abstract

This paper gives a philosophical outline of the importance of plausible ontologies in the social sciences and argues how mechanisms and processes should be placed as the foundation in the social world. The argumentation is mainly based on a critical appraisal of the use of mechanisms and processes in the works of Norbert Elias, Charles Tilly, and Jon Elster. I start by elaborating on how inquiries of scientific interest evolve to shed light on cases, facts and the things that constitute such facts, whilst the actual explanation demands the description of mechanisms and processes. Basically, focusing on *(co)variation* and *difference making* is not sufficient to sustain claims of ontological plausibility and reasonableness. It is thus pointed out how the practices and proceedings of the social sciences can be ontologically enhanced by embracing the complementary roles of *mechanisms* plus *processes* together with *difference making*, as is performed in a special science such as biology, as well as is informally but promisingly pursued in the works of the discussed social scientists. While discussing their work, it is also argued that we should differentiate between processes and mechanisms in order to formalize this approach, which highlights the role of technologies and institutions as prime building blocks for social explanation. I conclude by presenting a claim that in taking seriously that the purported relations between beings and entities need to make discursive sense and historical sense, the social sciences will increase our cognitive success about the things of the world.

Keywords Plausible Ontologies · Mechanisms & Processes · Technologies & Institutions · Explanation · Social Sciences

Considering ontology as the universe of what *there is*, whilst epistemology as the universe of human cognitive success, in a simple arrangement of apprehension, reason and discourse (logos) the most fundamental is to get right *what there is*. At least for a scientific endeavor, if one is not apprehending, describing and explaining something that *is there*, cognition is missing the point. Although the lenses to see what *there is* conventionally lies in epistemics, that does not mean that the current epistemological universe hits all points of

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Fig. 1 Ontology and epistemology universes (each of these universes has many ontologies and epistemologies respectively within).

the ontological universe or that its “success” precludes it from hitting areas beyond the universe of what *there is*—which is awkward but exceedingly human. To be sure, the scientific endeavor only moves forward when there is an adequate conjunction between ontology and epistemology. However, the one that adjusts is the latter, because the former is just there to be discovered and better covered by the latter (Fig. 1).

This essay focuses on the importance of addressing the ontological status of the objects of investigation to situate the plausibility of mechanisms and processes. While both possess the potential to offer explanations for inquiries of interest to political, economic and social sciences in general because they are in many ways the fundamental stuff of the social world, it is argued that differentiating between processes and mechanisms is beneficial. Not just for the differentiation per se, but so that one can use both in the explanation. A process is something longer and composed of various mechanisms, or one mechanism that persists through time. While mechanisms are productive of regular changes, processes are the cumulative, endogenous result of such changes. This argument is discussed in relation to concepts that have relevant explanatory power, respectively, *brokerage* in the work of Tilly and *monopolization* in Elias, with a greater focus on the latter. The toolbox of mechanisms presented by Elster (1989, 2015) is also considered with the aim of shedding light on two more basic mechanisms that arguably constitute prime building blocks for social explanation, and that thus offer a more direct and visible avenue of inquiry: technology and institutions. Finally, considering that the kinds of explanations brought by mechanisms can be traced to an influence of biology on the social sciences, a few considerations are made on earlier moments of this attempt to rely more on concepts brought from that sister special science rather than from physics.

Inquiries of scientific interest evolve to shed light on cases, facts, and the things that constitute such facts.¹ Even though it is the most fundamental, the ontological status of the objects under investigation are bound by epistemological considerations on what *there is to know*, and what are the processes of perceiving, reasoning, memorizing, and judging. In sum, what can we know, what do we know about our circumstances, how our circumstances and tools limit us, and how we accept something as valid knowledge of scientific interest.

¹ Consciously or subconsciously, most researchers agree that something becomes scientific by adherence to a consecrated logic of inference that sidelined the importance of relations of ideas to relations between causes and effects. As George and Bennett put, it is “the epistemological logic of deriving testable implications from alternative theories, testing these implications against quantitative or case study data, and modifying theories or our confidence in them in accordance with the results” (2005, p. 32).

Undeniably, one can only focus on the smaller universe of established human cognitive success and operate inquiries within it. Although the aim of the epistemic universe is to fit entirely in the ontological universe (the left part of Fig. 1), actually it is often the case that accepted epistemics are universes more like the darker gray one in the right side of Fig. 1, in which part of it escapes the universe of what *there is*—therefore, it could hardly be considered a cognitive success.² For the time being, the outputs of such inquiries are considered successful because they are underpinned by accepted methodologies that fit with the epistemics.

However, the scientific enterprise is one of increasing the scope of human cognitive success and for that, one needs to ponder about what *there is*. “What there is to know” is the fine, permeable line that contains cognitive success in as much as it overlaps with “what there is.” The line is permeable because *failures* are not necessarily irredeemable, as they become convertible into cognitive success through detection and correction of mistakes. Nonetheless, it is not enough to get the “right” epistemics—with its underpinning methodology(ies)—one should aim at a plausible ontology first. An object of investigation that *is there* in the world and that we can increase our cognitive success by exploring and explaining it.

In this sense, mechanisms and processes are in many ways the fundamental stuff of the social world (and an important element in the natural world as well). Therefore, exploring them can contribute to increase the universe of cognitive success over the universe of what *there is*. With the further benefit that such approaches can actually explain³ social phenomena rather than simply imputing their existence in a causal relation because of patterns of co-occurrence measured in covariance that correspond to theory (and survives statistical tests). Most effects (or, better put, outputs) that are still to be interestingly explored are not produced by independent-variable causes but rather by complex units in rather endogenous ways. The challenge is to plausibly describe such units and the workings of endogeneity. Moreover, even the relations between variables that are still to be uncovered—as well as the workings of exogenous difference making—are more likely to be properly covered by emphasizing a pursuit of more plausible ontologies.

² Sometimes they become successful just because if accepted on large scale—even if objectively not belonging to the universe of what *there is*—they influence ontology at least on its realms that have more plasticity. On the other hand, the “failure” is less problematic and indeed more contributive to the scientific endeavor if it is recognized as such. The problem is that this often is not the case provided that the results adhere to accepted methodology and epistemics. For instance, in hypothesis testing there are more incentives to *avoiding* both type 1 and type 2 errors than to recognizing them. Even though recognizing them would arguably help to advance or better adjust epistemics. Even if working with variables and hypotheses—and their accompanying null hypotheses—more than fitting them on the epistemics, ideally they should fit in a plausible ontology. Of course, the scientific window to the ontology is epistemics with its accepted methodologies. However, having complex units, variables, and hypotheses that fit epistemics with its accepted methodologies but that do not hold ontologically does not advance cognitive success. Arguably, the universe of knowledge always falls short from the universe of what *there is*, thus one important enterprise is not asserting that something that *does not exist exists* or something that *exists does not exist*. Moreover, plausibility regarding existence of events and phenomena comes from the explanation that presents itself through processes and mechanisms, not from simple interactions nor even from the consecrated practice—in Neoclassical Economics, as well as in the dominant paradigms of the international relations (IR) discipline, for instance—of jumping from theory to measurements of *difference making* to ascertain causation.

³ Or at least make an honest effort to.

1 The Ontological Primacy of Well-Explained Content

Scientific knowledge is distinguishable by its form and its content.⁴ Although both are critically important, content has primacy, because it is content that expands cognitive success over the universe of what *there is*. Many are the enterprises that have *format* of scientific knowledge but that do not improve cognitive success—which is more or less⁵ fine if they are operating within a given epistemic tradition and conscientiously failing or infinitely reaffirming what is already known (i.e. results that already belong to our collective cognitive success).⁶ Conversely, variation in the *format* of scientific knowledge is a matter of varieties of epistemologies, which are welcome inasmuch as they enable explanatory pluralism. In turn, enabling explanatory pluralism is primarily a matter of operating within the universe of what *there is*. Ponder about what *there is* first, then turn to the helpful epistemics and methods.

If there is an established X/Y relationship, focusing on the causal mechanisms existing within can either give a new explanation for how X causes Y or it can “disconfirm the entire hypothesis” (Gerring, 2012, p. 30). The focus on mechanism implies an effort to get inside the arrow linking X and Y that, if treated as a black box, might be concealing what is actually interesting or misleading about the distinguishable pattern of co-occurrence.

For getting more meaningful and honest cognition about the stuff of the social world, one needs to untangle expectations from Hume’s conception that good reductionism implies that “the truth of a singular causal proposition depends on the truth of a generic causal proposition. The truth of the proposition that the singular event A causes the singular event B presupposes the truth of the generic proposition that events of the same type as A are followed by events of the same type as B. In other words, there can be no causation between singular events without an appropriate regularity at the level of types of events” (Kistler, 2018, p. 97). By untangling I do not mean abandoning, but opening space for mechanisms between A and B that are not simply glues attaching A to B. As there are types of events, there are also types of mechanisms. Rather than glues, mechanisms are conduits. Some of these conduits approach law-based accounts of scientific explanation in the sense that A is smoothly—or predictably—conducted to B, others do not inasmuch as they are much more *inter-systemic*.

One way to illustrate this is comparing Dominoes and Chinese Whispers.⁷ George and Bennett (2005) illustrate their attempt to identify “causal mechanism between an independent variable (or variables) and the outcome of the dependent variable” (206) by recurring to the dominoes image: “If one had a row of fifty dominoes lying on the table after they had previously been standing, how could one make inferences about whether the first domino caused the last to fall through a domino process, or whether wind, a bump of the table, or some other force caused the dominoes to fall?” Tellingly, the example chosen is one

⁴ Content being composed of the cases, the facts, and the things that constitute such facts.

⁵ The valuation is often a matter of taste and interests assessed through a tradeoff between replication and originality. In the limit, the idea that “we can tolerate waste, but we should not accept harm” (Elster, 2015, p. 474) associated with the idea that although the “falseness of a model may be essential to its role in producing better models, [it is not] any false model [that] provide a road to the truth” (Wimsatt, 2007, p. 103).

⁶ I am not by any means disputing the importance of failures and negative outcomes from trial and errors, quite on the contrary. Nor am I restraining the realm of ‘what there is’ to what we can explain in our current time. My goal is mostly to emphasize that we should better explain what we affirm as being part of ‘what there is’ in the realm of social sciences as they are practiced. After all, as some of these investigations end up informing policy as well as our ideas of cognitive success, they need at least plausible foundations.

⁷ The latter game is also referred to as “Telephone” in different areas of the English-speaking world.

that can be fully covered by physics (and within physics, by *mechanics*, most specifically). Standing dominoes have potential energy released by motions that are connected by collisions. The force the domino generates when it falls is greater than the force required to topple the next domino. Yet it is not *just* the first domino that topples down the last. The next-to-last domino and all previous dominoes and their dispositions are important for that chain reaction. The mechanism is identified as an intervening variable that,

is both fully caused by the independent variable(s) that preceded it, and that it transmits this causal force, without adding to it, subtracting from it, or altering it, to subsequent intervening variables and ultimately through them to the dependent variable. When the observable events that intercede between hypothesized causes and observed effects have this character, they constitute “diagnostic evidence,” not “variables.” Diagnostic evidence indicates the kind of process taking place, but does not transmit any independent effects to the dependent variable (Bennett & Checkel, 2015, pp. 6–7).

These conduits are the types that approach law-based accounts of scientific explanation. Whether they exist as they are portrayed, or they are being portrayed this way more in an attempt of not distancing too much from estimation of causal effects is another question. After all, dominoes are dependent on each other in the chain reaction. The mechanism perspective on explanation becomes clearer when it is possible to identify more organic—and arguably more plausible to find in the social world—mechanisms such as Chinese Whispers. Here, paraphrasing as close as possible the dominoes illustration the “intervening variable” transmits this causal force, adding to it, subtracting from it, and altering it, to subsequent “intervening variables” and ultimately through them to the “dependent variable.” Better framing, one can say that there is an input—the whispers—to entity A that will result in an output revealed in entity B after a set of activities—the mechanism of the game itself. Between A and B, mechanisms such as Chinese Whispers alter the input that entered the system in A, all the way to receiving the output in B.

Dominoes and Chinese Whispers are probably extremes of mechanisms that can either be law-based accounts of scientific explanation—the former—or complex merges of communicational, psychological, chemical, biological, and physical operations that are not reducible to *mechanics*—the latter. Between the extremes, one can actually engage in the discovery and individuation of mechanisms composed of entities and activities that have “set-up conditions, termination conditions, and intermediate stages” (Machamer et al., 2000, p. 11), and that can intelligibly show “how possibly, how plausibly, or how actually things work” (21).

With that, cognitive success will therefore expand, inasmuch as epistemics is the process of bridging an unavoidable conceptual gap that exists “from the world of situations, events and processes to that of statements and inferences” (Coddington, 1975, p. 152). In turn, the bridging to covering more of what *there is* is provided by explanations that reveal the activities that sustain the regularities; that reveal the productive relation (Machamer et al., 2000, p. 22).

2 Down with Physics Envy: Embracing Being Part of the Special Sciences

Considering that the dynamics of social interaction, relation and change are not perfectly explained by the sorts of equilibrium models and the practice of regressing everything in sight and make inferences (and decisions) based on values assumed by the betas, which are the present basis of these sciences in their applied form, there are many benefits from including biology's concepts and approaches. If Goethe is right that "in nature we never see anything isolated, but everything in connection with something else which is before it, beside it, under it, and over it" (Eckermann, 1883, p. 156), the same is true for the social (even for misanthropes).

To be sure, biology's concepts and approaches had and have implications in areas that go a fair way beyond what in the beginning of the nineteenth century started to be called biology.⁸ It is interesting to consider though how it had and has less influence than physics, and how its coming back through the literature on mechanisms can be beneficial. For instance, when the boundaries of economics as a discipline were being defined, Alfred Marshall envisaged a central role for "economic biology". The problem as he admitted was an operational one due to the fact that "biological conceptions are more complex than those of mechanics" (Marshall, 1920).⁹ Mechanics—and not mechanisms—was then picked to guide the discipline.

Schumpeter has embedded in his prose evolutionary concepts and metaphors, but he would dismiss, however—not without giving a comprehensive record of the attempt to do so (1954, pp. 788–92)—the possibility of formalizing the application of evolutionary biology to economics, following more or less Marshall's argument about its impracticability. Nonetheless, from Schumpeter an evolutionary branch of the discipline followed suit—even though it is not mainstream.

Economics gets away with avoiding complexity because it has the "measuring rod of money," as Pigou, Marshall's successor in Cambridge once implied (see Pigou, 1920, p. 32). And it has a couple of laws—such as supply and demand. In the absence of scientific law, one had better get a mechanism to explain things. In the way Elster (1998, pp. 48–49) frames it, "the antonym of a mechanism is a scientific law. A law asserts that given certain initial conditions, an event of a given type (the cause) will always produce an event of some other type (the effect). [... Whilst] the mechanism provides an explanation because it is more general than the phenomenon that it subsumes." I do not know if antonym is the right word, but indeed mechanisms provide a bridge to plausible ontologies for social

⁸ R. Richards (in Cahan, 2003, p. 16) explains that although the term "biology" has already been used before, it was used in a way that differs from nowadays understanding of it. Complementarily, Roe (in Porter, 2003, p. 416) remarks that, even though the concept received "slightly different" explanations in the beginning of the nineteenth century, they kept an overarching similarity not observed before.

⁹ In the preface for the 8th edition of his *Principles of Economics*.

phenomena in replacement of implausible assumptions that are treated as if they were scientific laws for the sake of making research get results.

As G.L.S. Shackle (1991) sustained that “economics is about thoughts,” one could add that politics is about thoughts and that social sciences in general are about thoughts. He would take issue with the assumption of rationality of agents because that would imply that agents not only are fully informed, but that they know the future (this is ontologically implausible, yet there is a long scientific literature¹⁰ based on such assumption—even if implicitly or consciously and overtly assuming the limitations stemming from this choice). Instead of making amends to an implausible assumption in order to make it less implausible,¹¹ perhaps it would be better to make an effort to give clear accounts of mechanisms and processes. It is thus sensible to borrow some thoughts from biology. To be honest, if Wimsatt is persuasive that “logical empiricist accounts of scientific theories, laws, explanation, intertheoretic reduction, and the like might make sense in the context of physics but were not adequate to characterizing biological phenomena” (Glennan, 2016, p. 874), that is even more the case in the social sciences.

As explained by Joffe (2013), in biology even if the evidence is not always available for mechanism and difference making, “causation necessarily involves both” playing complementary roles. Moreover, the reliance on both is considered as “ontologically necessary” (179). Thus, one needs to search for *difference making* and explain how that takes place in a *mechanism*, or vice-versa—explain how something takes place in a mechanism, then search for difference making that demonstrates the causation. Inasmuch as cognition is a collective activity intrinsically related to the social, the endeavor here has more to do with reforming, or sharpening, or reconciling *thought styles* than *paradigms* (Fleck, 1935).¹²

3 Rules and Means: Embracing the Explanatory Power of Institutions and Technologies in the Social Sciences

A reasoning that is arguably generally applicable to social sciences, is that in order to provide some reducibility as well as explanation that is more general than the phenomenon that it subsumes, one might identify *technologies and institutions* that are fundamental explanatory parts of mechanisms that produce regular change and belong to larger processes (such as development or socioeconomic change). In a certain way this aims at “the

¹⁰ For some influential examples and thoughtful discussions see Fama (1970); Sargent and Wallace (1973); Brock (1974); Elster (1986); Reny (1993); De Vroey (2003); Lehtinen and Kuorikoski (2007).

¹¹ A movement that started to gain traction in economics—the most nomothetic of the social sciences—in the 1990s mostly via two academic avenues. One was opened by the reinstatement of the necessary attention to “the influence of behavioral factors” (Thaler, 1997, p. 441), which led to the growing influence of *behavioral economics*. The second took place through the rehabilitation of *institutional economics* as endorsed by the four prizes in Memory of Alfred Nobel awarded to researchers associated with this approach—R. Coase, D. North, E. Ostrom, and O. Williamson—since 1991. Perhaps because of the rather strict way in which both new strands had to reconcile with dominant neoclassical theory, there is still no emphasis on mechanisms and processes. Furthermore, when they are included it is still either marginally in both previous strands, or in a normative outcome-oriented applied strategy of the sort found in Mechanism Design Theory (Maskin, 2008). Nonetheless, as a token of how promising these avenues are, they have been the ones that keep closer conversations with other social sciences thus being open to cross-pollination, which in turn often results in more plausible understanding and explanation of a series of phenomena (see Smelser & Swedberg, 1994; Hall & Taylor, 1996; Fligstein & Dauter, 2007).

¹² Moreover, as biology taught Fleck, “a field undergoing development should be investigated always from the viewpoint of its past development” (1935, p. 20) so that one can shed light on the plausible roads ahead.

discovery of the real powers, propensities and forces of the world that [give] science its explanatory power” (Wight, 2006, pp. 45–46), but not at the level of scientific laws. If we find them operating in any event or phenomenon it is fine, it is indeed great, but regularities should neither come a priori nor be expected to operate in ways that *mechanics* (from physics) can sufficiently account for. The argument is that a relevant part is to be found in institutions and technologies, along with the way they propel and constrain entities and activities composing mechanisms and processes.

In assuming the primacy of mechanisms and processes together with interdependence (often evolving endogenously), one enhances the plausibility of social ontologies. At the same time, the set of entities presupposed by the theory attributing relations that entail variation and causality are to be empirically verified with some replicable method. Ascribing micro and macro relations to mechanisms and processes have robust explanatory power. This explicitly opens black boxes, which often makes more sense than assuming that inputs and outputs can be understood disregarding either what happens inside those black boxes or even their very existence. A valid critique, however, is that certain undifferentiation still blurs the use of mechanisms and processes as abstract concepts that indicate real phenomena.

For mechanisms specifically, Elster (2015) presents an interesting differentiation between micro and macro mechanisms. In certain ways, the social sciences “progress by the accumulation of mechanisms. When a new mechanism is added to the toolbox, it does not replace previous ones” (487). Meanwhile, process is a longer flow. It is the accumulation of rules and means in which things flow. As well as the assemblage of links through which things flow. In such flows, do things do what they are, or they are what they do? Probably both perspectives are reasonable, but especially social things—or social entities that are coherent pieces such as a firm in specific and organizations in general—are rather what they do. Being follows (or flows from) processes. The essence is a factor of its relations. Within these flows there are mechanisms, which are often the links of the broader process. Within macro and micro mechanisms there are more fundamental mechanisms that are institutions and technologies. For instance, laws (and informal rules) of marriage and divorce are institutions that enable and restrict mechanisms in the real world.¹³ Same for constitutional guarantees that because they are restricting, they are also enabling (Elster, 1989, p. 150).

In appraising Tilly’s attempt¹⁴ to develop a process-mechanism approach that offers an alternative to orthodoxy, Demetriou (2012) points out to an insufficient clarification of the constitution of and the relation between a mechanism and a process. According to Tilly mechanisms constitute a process (see Demetriou, 2012, p. 53; Tilly, 2017c, p. 204). The mechanisms are the interlinks bearing causality in the broader process. Brokerage being one of these mechanisms. Which when it is to be considered as important for an outcome,

¹³ Elster (2015) points out the institutional foundation of a mechanism structure in which agents have no incentive to deviate unilaterally from a bad equilibrium through the ancient Chinese practice of foot binding. “Given that no parents would let their son marry a woman who did not have her feet bound, it was in the interests of the parents of girls to adhere to the practice. Although crippling and horribly painful, the practice was sustained by the fact that no family had an incentive to deviate unilaterally” (478). Institutions—understood as the formal and informal rules of the game—are important parts of mechanisms, and prominent explanation for various processes. Also, to reap the benefits of this *thought style*, it is critical to differentiate institutions from organizations (North, 1990). While the former are the rules of the game, the latter are the players. Moreover, the framework of institutions and technologies taken together is what constrains human social organizations, their choices, and evolution.

¹⁴ See, for instance, Tilly (2001, 2008, 2017a, 2017b); and Tilly and Tarrow (2007).

it can be counted as a link through which things flow. The question is whether there is sufficient explanatory power in that. And whether the link has the characteristics of a mechanism other than simply being a link. Indeed, brokerage is composed of entities and activities that have set-up conditions, termination conditions, and intermediate stages.

The point here is that to explain how brokerage positions bear causality, one has to refer to institutional and technological mechanisms that both precede and sustain that position. The drawbridge operator is in a brokerage position, but the quality (and quantity) of brokerage that is going to take place is not sufficiently explained neither by the broker nor by the position but by the technology (the drawbridge) and the rules of the game (the institutions) conforming the broker and the position. Thus, it could seem right to stress that brokerage is rather a process than a mechanism (Oliver apud Demetriou, 2012, p. 52), unless there is this definition that mechanisms are productive of regular changes, while processes are the cumulative, endogenous result of such changes.

While the rather predictable drawbridge operator is not the kind of brokerage that often matters for social sciences, the brokerage that produces “new connection between previously unconnected or weakly connected sites” (Tilly & Tarrow, 2007, p. 215) needs to provide an explanation that is more general than the phenomenon that it subsumes to constitute a mechanism. Brokerages that are at the same time interesting and seem to be mechanistic, are the direct expression of technological and institutional mechanisms embedded in a simple action. It is not necessary to assume that brokerage as a mechanism always works in the same way. Unless the focus is merely on the action of connecting, of associating. However, would this narrower focus be sufficient to describe a social mechanism? Because they are social it is possible to have some variation in the termination condition of the mechanism. Brokerage can connect and disconnect, can act to let things flow or not. While brokerage opportunities emerge for those who see structural holes in networks, not only is bridging over those holes subject to diminishing returns, but also “formidable advantage” comes from combining brokerage with closure—and from managing their contradictory interdependence (Burt, 2005). In the social world, both the management as well as the eventual lack of intentional management over these associations are explainable by institutions and technologies that conform human action.

What is social? “Is a fluid visible only when new associations are being made” (Latour, 2005, p. 79).¹⁵ The associations caused by brokerage make this fluid visible but what one sees in the fluid are technologies and institutions that actually explain how those new associations bear causality in the broader process. In this sense, the plausibility of defining brokerage as a mechanism is conceded although it seems that the generative forces are relevant to explain its characteristics and outcomes. Not all brokerage is the same. The rules and customs, along with the technologies—and most importantly, assemblages of them—that create a brokerage position explain more and allow for relevant variation.

¹⁵ Indeed, when Latour skipped the adjective ‘social’ in Latour (1986) he was already pointing out that one should be a conscientious user of the term, thus only using ‘social’ in relation to the occurrence of associations that carry specific and traceable meaning. This is especially interesting considering the angst often expressed in noise that things are changing significantly in the recent years to the point of putting in check many of the building blocks of social, economic and political analysis. While Touraine (2013) offers a well-accomplished signal of why that can be the case, it is important to be aware that thinkers such as White point out that “whatever the changes in human social organization, the building blocks remain identity and control (Bourdieu, 1995; Luhmann, 1995; White, 1992), and the only reliable guide is explicit theory” (2002, p. 319). The argument here precisely being that *explicit theory* needs to show itself through explicit mechanisms and processes hand in hand with the empirics of difference making. Moreover, I call attention to the idea that *identity and control* are actually the cornerstone, while the building blocks are *technologies and institutions*. Further operationalizing these lenses can promote scientific creativity that will help to better understand human social organization.

This seems to be even more the case in Elias (1939), where one can unravel a fine example of powerful mechanism that depending on the perspective can constitute a process. Arguably, more than just a monopoly mechanism, what he accounts for is a monopolization process informed by technological and institutional mechanisms. Apparently, he places monopolization as a mechanism in his evolutionary account because he wants to reserve process to his broader civilizing account. To be sure, he provides a sensible and plausible description of the mechanism (pp. 263–264; 269; 303–306) at the most macro level. However, there is arguably variation in the termination condition of this mechanism at lower levels in the sense that one can observe either monopolization or (de)monopolization. This is important because monopolization is not deterministic.¹⁶ Although Elias might seem to condone this idea in talking about how if key monopolies decay “so do all the rest” (268), the countervailing measures (269) that he talks about can actually alter the flow’s direction.

Such measures would refrain the system from becoming one of closed opportunities, making it a much richer account of a mechanism that constitutes part of his broader civilizing process that can also, but not necessarily, be a monopolizing one. A plurality of exchanges that are neither voluntarist nor deterministic and that differs from “the traditional view [which] emphasizes competition almost to the exclusion of cooperation, [whereas] in fact both are very important” (Dupré, 2012, p. 10) would reinforce its plausibility.

Apparently, Elias does not focus on explaining at length the generative forces of his monopoly mechanism. Partially because they are taken as being a natural evolution in which people fight one another for opportunities in an elimination contest that results in monopolies. By assuming monopolization as natural it leads him to talk of mechanism as if akin to natural selection. This gives him an initial strength through simplification, at the same time as showing important weaknesses when one tries to actually explain how monopolization takes place within civilization. As well as how (de)monopolization also occurs.

Elias portrays the nuances of an unending process for controlling “the keys to distribution” (275) in which more than simply sublimated, past struggles for monopolization and (de)monopolization are embedded and coded in institutions and technologies that project the future. They are the keys. In them are the answers for *how* questions. After all, “it is of the very essence of an ongoing process that it combines existence in the present with tentacles reaching into the past and the future.” (Rescher, 1996, p. 39). The nuances of this process are especially captured by the understanding that the “monopolist’s freedom of decision is restricted more and more by the immense human web that his property has gradually become” (Elias, 1939, p. 272).

Take firm monopolies as an example. After the oil sector in the U.S. became increasingly monopolized throughout the nineteenth century, in 1911 the U.S. Supreme Court ruled that Standard Oil would have to be divided into 34 different companies. Such countervailing measure came through stipulating new rules of the game (i.e. institutions). Later on, in the twenty-first century concentration was high again, but a technological innovation slightly demonopolized the market by bringing in shale oil producers. The 2020 pandemic crisis is set to prop up monopolization again by taking out producers that cannot cover the costs of operation in a depressed market. Further institutional change ahead (evolving around and beyond the 2016 Paris Agreement) can make the oil sector cease to

¹⁶ While “laws may either be deterministic, in the sense that a given physical state uniquely fixes a dynamical history, or stochastic, assigning a probability distribution over possible histories” (Hoefer & Smeenk, p. 141), mechanisms are piecewise approximations. It is not about being “anti-reductionists or anti-determinists. [But] simply responding to widespread and reproducible intuitions as to when a change in the total state-description is counted as a change in the mechanism, and when it is not.” (Wimsatt, 2007, p. 256).

exist in general, but that would also likely demand associated technological breakthroughs. The point is: monopolization is a factor of lower-level mechanisms of institutions and technologies. One has to refer to other underpinning mechanisms to explain it more sufficiently than just itself as a mechanism.

In large part because “outcomes [are] the result of a dynamic process in which some of the interacting factors are products of earlier stages of the process, rather than as the result of the arrangement of preexisting factors into a static mechanism” (Griffiths & Stotz, 2018, p. 229). A similar story could be told of current monopolies such as Amazon vis-à-vis the retail sector. It is a tale of interacting institutions and technologies through time. This exercise, or thought style, could open an avenue to overcome the ambiguity that still hinders the explanatory use of mechanisms (Demetriou, 2009) and processes, with a view not to *replacing* current consecrated ways to study the effects that one or a few variables have on a dependent variable, but to *placing* mechanisms, processes and difference making in complementary roles to ascertain causation.¹⁷ It is about reducing both the occurrence of “discrediting research unduly,” as well as of “making leaps of causal inference where none are warranted” (Protzko, 2018).

4 Conclusion

In order to formalize this approach, the road of empirical observation and research open ahead starts by developing a more useful framework for differentiating between processes and mechanisms, together with embracing the explanatory power of institutions (the rules) and technologies (the means) as prime building blocks in the social sciences. One way of doing that is by applying this thought style to (re)explaining accounts that are interesting and relevant to the social sciences. For instance, White (1966) offers a seminal review of the role of technology in medieval social change. He points out that the mastery of waterpower, whose beginnings took place in the decades “during which Rome was extending her sway over the Levant,” was a conquest far more enduring than the *pax Romana* (80). Waterpower is technology. The *pax Romana* is a period of time marked by traceable institutions. Such as the contemporary world is marked by social outputs that are explained by technologies, by institutions, and by the interplay between them.

In a more recent account, Pistor (2019) maps the institutional ingenious mechanisms in which diverse kinds of assets such as land, business organizations, private debt, knowledge, and nature’s genetic code are coded and turned into capital, generating and distributing wealth and power. Complementarily, current technologies (especially the information and communication ones) are also at the core of the mechanisms that offer a qualitative change in the way of identifying, organizing, controlling and distributing inputs, outputs, revenues, and surpluses.

Although emphasizing the role of processes and mechanisms as critical means to test and enhance the plausibility of the inputs and outputs arising from the focus on (co)variation and difference making, my argument is not aiming at creating logical enclosures that worried Husserl (1937, p. 7). It is rather pushing forward the discussion that in accepting that “scientific, objective truth is [...] a matter of establishing what the world, the physical

¹⁷ Arguably, currently there are no sufficient incentives for researchers to bother explaining the mechanisms and processes that make X make a difference on Y. This in turn leaves room for many implausible claims that end up influencing policy. Therefore, if we want better policies (perhaps the most consequential output from the social sciences) we need to start by taking care of the ontological foundations of the scientific inquiry.

as well as the spiritual world, is in fact” (1937, 6), one needs to build the foundation on plausible ontologies that are to be explained with processes and mechanisms in order to sustain the occurrence of causation.

In all, it is important to put effort into the basic search for ontologies that are plausible. The purported relations between beings and entities need to have discursive sense and historical sense. They also need to help to increase our cognitive success about the things of the world. Arguably, the approach of processes and mechanisms has great potential to provide more of that for the social sciences in the endeavor of understanding the evolving flows of social life.

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