Calibrating the Conatus in Morphogenetic Régulation

Published in:
Journal for the Theory of Social Behaviour

Publication status and date:
E-pub ahead of print: 24/01/2024

DOI (link to publisher):
10.1111/jtsb.12408

Document Version
Publisher's PDF, also known as Version of record

Received: 29 August 2023 | Revised: 22 December 2023 | Accepted: 22 December 2023

DOI: 10.1111/jtsb.12408

ORIGINAL ARTICLE

WILEY

Calibrating the Conatus in Morphogenetic Régulation: Towards a Problématique of Perseverance

Karim Knio

Institute of Social Studies (ISS), Erasmus University Rotterdam, The Hague, Netherlands

Correspondence
Karim Knio.
Email: knio@iss.nl

Abstract

The intersection between Critical realism, complex system thinking and Luhmannian autopoiesis has been subject to various debates. By showing how a complex system necessitates a trans-immanent philosophical foundation, Knio proposed in a previous article a problématique of calibration which seeks to bring back to the fore the importance of considering a complex causality generated by environments onto boundaries and systems in an iterative, recursive, and emergentist way. The next step is to understand the motivation behind the actions of a trans-immanent system. This paper contributes to this discussion by operationalizing the motivation behind action in terms of the Spinozian conatus. In so doing, this research shows how trans-immanent systems such as people and society not only objectify (socially construct) but objectivate (create) objects behind desire. Finally, the forgoing shows how systemic persistence is not a simple matter of inertia or imitation but it is a matter of empowering reflexivity or, perseverance. This is shown through a thorough overview of the different interpretations of the conatus, followed by their application to several case studies within pre-existing and prominent theories of institutional change within capitalism. As a result, the conatus as based on a trans-immanent system offers great potential in institutional analysis; exemplified

in the Critical Realist model of social change: Morphogenetic Régulation. This research contributes not only to political, economic, social, and cultural analyses of institutional change but analyses of complex and open systems as a whole, and thus understandings of human empowerment.

KEYWORDS
complex systems, conatus, endometabolism/hybridization, morphogenetic/French régulation, perseverance, self-reinforcing/reactive sequences, trans-immanent systems

1 | INTRODUCTION

The literature on complex systems often distinguishes between complex and complicated systems. While complicated systems explain wholes through the predicament of their parts, complex systems focus on the dynamic interactions between wholes and parts, where wholes themselves are parts of other wholes and their ensemble (Cilliers, 1998). As such, Critical Realism's (CR) focus on open systems necessitates an understanding of complex systems. While some CR scholars contemplated on a possible interaction with Luhmann's autopoiesis given its prominence in complex systems thinking (Mingers, 2006), others emphasized the limitations of this concept due to its incompatibility with Bhaskar and Archer's analyses of emergence (Elder-Vass, 2007). Building on these insights, a more recent article attempted to shift the terms of the debate on Luhmann's autopoiesis' (in)compatibility and limitations with CR towards a more detailed examination of the philosophies of substance and persistence and their implications on complex systems (Knio, 2023). In that article, Knio (2023) showed how a complex system could benefit from being understood in terms of transcendental-immanent objects and this would necessitate a link between the parts of a complex system and its relational whole without elision. To these ends, Knio demonstrates through the Spinozian doctrine of parallelism how the relational and non-relational nature of objects necessitate a specific unison between their qualities, properties, and dispositions (defined as caliber[1]) without eliding them into a singular totality. For example, Archer's argument that calls for the *ontological separation* between material and ideational dispositional capacities at the conditioning level (structural and cultural emergent properties respectively in Archer's lexicon) necessitates an apriori argument that specifies the unity of their emergentist relations. As such, and unlike Luhmannian autopoiesis, understanding complex systemic reproduction in terms of trans-immanent objects enables a non-linear causal analysis through the identification of calibers within system environments.[2] In so doing, it becomes possible to analyze the recursive, emergentist, and stratified features of trans-immanent systems across various temporalities. This paper deepens the forgoing research by explaining the motivation behind the action of trans-immanent object-lead complex systems. Therefore, motivation is operationalized through the concept of the conatus (Melamed, 2018).

Yet, like many concepts in philosophy and the social sciences, the conatus has been interpreted in various ways. Therefore, in the following sections I first provide an overview of Spinoza's reading of the conatus. Second, I compare it with its interpretations within the Spinozian tradition. Third, I distinguish between three strands of literature that refer to two non-trans-immanent readings of the conatus (inertia and imitation) and one trans-immanent (reflexive including speculative and contemplative). Fourth, I review each of these interpretations through their application to complex system

analysis within political economy. The inertial and imitative conatus are explored through French Regulation (FR) which is a non-trans-immanent approach while the reflexive (including speculative and contemplative) is explored through Morphogenetic Régulation (MR) (Knio, 2020, 2023); a trans-immanent, Critical Realist (meta) theory and methodology of socio-economic transformation. Consequently, I argue that this conatus is most consistent with CR showing that it explains how complex systems target the formation (objectivation) and construction (objectification) of interests. As a result, this analysis suggests a necessary temporality between the processes of hybridization and endometabolism which were previously unspecified and de-ontologized in FR. More broadly, the problématique of perseverance suggests that complex systems can increase their power through the ways in which they persist. In other words, reproduction can potentially empower transformation as opposed to being simplistic continuation or imitation of previous states. In so doing, the author contributes to a deepening of Bhaskar's overall body of work which makes a case for the possibility of human empowerment (Bhaskar, 1998, 2008).

2 | SPINOZA'S CONATUS AND ITS CONTEMPORARY SPINOZIAN INTERPRETATIONS

When speaking of the conatus Spinoza defines it in the following way: "with which each thing endeavors to persist in its own being is nothing but the actual essence of the thing itself" (E3P7). The conatus is to be understood as the vehicle of willingness (when it concerns only the mind), appetitus (when it concerns both the mind and the body), desire (when human beings are aware of their appetitus) and impetus (impulsion) (E3P9scollie & E4Def1). The following discusses the conatus by first fleshing out the above characterizations of the conatus vis-à-vis Spinoza. Then, I discuss the three interpretations of the conatus within the Spinozian tradition: inertia, imitation, and reflexivity (including contemplative and speculative). These can only be understood given the tripartite relationship between substance-modes-attributes. Finally, I situate our preferred understanding of the conatus–reflexive (including speculative and contemplative)– in juxtaposition with all three. I argue that this understanding of the conatus is most consistent with CR as will be shown through the example of Morphogenetic Régulation.

In Spinoza's view, human beings tend to be drawn to what can increase their power of activity. Thus, the imagination is also at work towards this perseverance in its own being. As follows from E3P12, "The mind, as far as it can, endeavors to conceive those things, which increase or help the power of activity in the body" (E3P12). It follows that a human's perception of what increases their power of activity is crucial in orienting their conatus. Indeed, the conatus consists of the vehicle of a desire without an object, the object of this desire is not desirable per say, "we can easily conceive, that one and the same object may be the cause of many and conflicting emotions" (E3P17, Note). Thus, the starting point for a description of the conatus is as that which moves towards desire, the vehicle, without being the desire itself.

Yet, the way the vehicle, the conatus, driving us towards (the objects of) desire is constructed is a matter of the essence of mind. As the, "essence of the mind is constituted by adequate and inadequate ideas […] anything can, accidentally, be the cause of pleasure, pain, or desire" (E3P15; E3P9, Proof). Indeed, if two thoughts are associated, one concerning something that will help us in our persevering to exist and the other which will neither help nor hinder us, one will then associate the second one with the first and falsely attribute causality to this desire. This means that as the mind constitutes the conatus, the conatus is necessarily responsive to the (in)adequacy of ideas.

While the above explores the action of the conatus and its making, it does not explain what stimulates that action. That towards which the conatus is driven (or perhaps driven by) is desire and its construction appears as at least partially socially determined as the desire of others (provided we

regard those others without any particular emotion (E3P29)). This is because a similar object will reinforce our own desire for that object. Indeed, one does not desire an object for itself and its qualities, but we rather attach qualities to the objects that we desire. According to Spinoza, "[i]n no case do we strive for, wish for, long for, or desire anything, because we deem it to be good, but on the other hand we deem a thing to be good, because we strive for it, wish for it, long for it, or desire it" (E3P9, Proof).

The conatus thus appears to be inherent and intrinsic to each thing, while also being dynamic. Indeed, the changing ways in which such desires are identified provides a dynamic account of the conatus as the vehicle of desires that can be adequately or inadequately identified as helping us to strive and increase our power of activity. It follows that to strive, one needs to adequately identify the cause of its growing power of activity. The conatus is then both expressed through desire and motivations, while having effects on both. Based on the above, the broader Spinozian tradition distinguishes between inertia, imitation, and reflexivity-lead (including speculative and contemplative) interpretations of the conatus which I will subsequently develop in the following sections.

2.1 | Classic readings of the conatus: Inertia

The first reading of the conatus is that it is a drive within beings such that persistence in being is through the reproduction of desire and passion. This is because desire and passion are that which one perceives increases their power, ultimately contributing to their persistence and perseverance. Within this reading the key characteristic of a conatus is that the conatus is the desires and passions in and of themselves. There is no antecedence to the desires and passions and they are accessed directly.

If desires and passions are the always actual and always related which the mind has access to then there is nothing in the desires and passions themselves. One consequence of seeing reproduction this way is its reduction to simple continuation. Thus, the conatus refers to a certain kind of metaphysical inertia through which finite things act through an attribute-neutral tendency to remain as they are. In short, the conatus is the same as the principle of inertia in that it prevents the body to modify its being by itself (Melamed, 2018).

A critique of this understanding of the conatus is that it is static and rather mechanical. From this approach follows an understanding of Spinoza as radically deterministic, "[i]n other words, we know that from a given state of motion and rest will necessarily follow another determined state of motion and rest. Alternatively, a dynamic principle is a much more flexible principle. In respect to a dynamic principle, when an individual is confronted by a given state of affairs, this individual will act in some determined ways (ways and not way: the plural is very important)" (Rouette, 2019, pp. 315-320).

Indeed, according to Carriero, the conatus is not simply about the principle of conservation (of motion), as the perseverance of complex objects in their own beings tends to improve. For instance, "in the case of a mind, its conatus includes a tendency to imagine things that will increase the body's power of acting and to recollect things that exclude the existence of things that restrain its body's power of acting" (Carriero, 2011, p. 70). Rejecting the existence of final causality in Spinoza, Carriero argues that, "things don't, on Spinoza's telling, welcome power-increasing effects because they are power-increasing; they just do—it's simply part of being a real thing" (Carriero, 2011, p. 90). This critique opens the possibility of inertia accommodating change at the level of action so long as it does not contradict the desires themselves and thus leading to no ontological change. With that said, the overarching critique of inertia as mechanical remains.

This means that beings are what they are as determined by the nature of their conatus. Reproduction and action are determined in a more or less unilateral way by the conatus. It follows that the conatus operates as wholly insular and disembedded from an agent's material environment. The implications

of this are that it is not possible to account for the origins of agents' motivations and desires outside of the conatus itself. The conatus is the end all, be-all–as though it is exerting its influence, unimpeded, through the body in which it inhabits. If power requires empowerment of agents, then this inertial reading of the conatus doesn't allow for a proper engagement with the concept of power because everything is determined in and through the conatus as a simple reproduction of itself. This is despite the fact that power is at the heart of the conatus for Spinoza. This understanding of the conatus characterized by movement set in motion only in virtue of itself as what it must do and constrained by that motion, was often reduced to the principle of the conservation of motion, the principle of inertia.

2.2 | Conatus as imitation

The second reading of the conatus is as a drive to persist in virtue of the passions and desires of others. As such, the conatus is oriented towards what it believes is the object of desire. It follows that unlike the reproductive and inertial reading of the conatus, this reading recognizes an object behind desire (while that object can never be obtained). In short, desire is generated by an object, but the conatus only orients towards desires vis-à-vis others and never the object itself.

This reading is exemplified by Lordon's work in which he conceptualizes the conatus through a structuralist and dynamic theory of individual action (Lordon & Ash, 2014). In *Willing Slaves of Capital*: *Spinoza and Marx on Desire* (Lordon & Ash, 2014) he develops an understanding of capitalism and its evolutions that is based on desires, inspired by a Spinozist reading. Lordon argues for a principle of passionate servitude as an explanation for how capitalism manages to put people in motion and thus to persist. Specifically, agents are moved by their conatus, which is oriented towards objects of desire that are "defined" by dominant agents.

In the context of capitalism, agents perceive themselves as being moved by their desires (money, commodities, ability to consume, etc). These desires are not desire in and of themselves but the object of desire as learned by perceiving others. This, as discussed by Spinoza in section two, is the heart of the conatus–to increase power via the adequacy of ideas about the self. Thus, agents are consumed with understanding the body but can only do so through their perception of themselves and others. But as Lordon and Spinoza both acknowledge, the conatus is an intransitive thing in and of itself and only accessible by perception in terms of its actualized affects. This results in agents internalizing the perception of others as their own desire as opposed to learning about or internalizing the desire in and of itself. This constellation between the conatus moving agents to deepen their understanding through perception of others in light of perception's inherent limitation and desire's intransitive nature means that the objects of desire (not desire itself) are socially constructed–guiding the conatus towards those objects.

Realizing this conatus will then generate joyful affects, it follows that objects don't hold intrinsic qualities, rather it is the actualized desire created at the contact of others through the representation of others' desires and their imitation that determines the value of an object. As such, "[t]here is nothing subjective about affects. They are objectively caused, and they produce the movements of the conatus just as objectively" (Lordon & Ash, 2014, pp. 4-7). Thus, the cause of the conatus is the objects of desire which are socially defined. This means that the relationship between the conatus and behavior is a drive to imitate others.

The conatus, according to Lordon, encompasses two concepts (Lordon, 2013).

1. The essential conatus, which is intransitive;
2. The actualized conatus, which is transitive and is geared towards specific objects of desire.

The conatus, in its essential form, is thus seen as the, "potential seed of all logics of action" (Lordon, 2013, pp. 4-6). In other words, this is the substance behind a unifying modification of substance. Lordon went to further define it as the, "most fundamental form of interest" (in that it is striving to persevere in its being) which, because of external factors, gets specified into a desire of something (the actualized conatus) (Lordon & Ash, 2014, p. 4). This imitative conatus doesn't fall into the pitfalls of a conatus understood solely as inertia but is utterly deterministic in that the conatus is hopelessly driven to imitate objectified desires without ever learning about them or their nature. It denies the possibility of increasing adequacy of ideas. As a result, it contradicts reflexivity and downplays the possibility of reason in shaping the conatus.

2.3 | The conatus as reflexive (including speculative and contemplative)

In contradistinction with the forgoing simplistic readings of Spinoza, the third reading not only accepts the object behind desires and passions, but also discusses the role of reflexivity in engaging with the conatus through a dynamic exchange. As such, this reading specifies the *kind* of reflexivities involved in charting the relationship between the impulse to persist and persistence itself. Therefore, this is argued to be the reflexive conatus (Balibar & Kelly, 2018) below which is further specified by CR scholars into the speculative (Collier, 1999) and contemplative (Evenden, 2012). Essential to this reading is the recognition of the object behind desires and passions and the possibility of accessing it in virtue of the actual desires and passions which are its expressions.

Balibar argues for this reflexivity by asserting that the conatus is based on both reason and imagination. It is imagination that pushes humans to strive for the imitation of affects, the identification of others as like themselves. Balibar defines the conatus as the, "effort to cause by reason the actions that passions determine" (Balibar & Kelly, 2018, p. 145). Thus, Balibar argues that reflexivity plays a key role in orienting the conatus. According to his reading of Spinoza, all natural individuals have an interest to self-preserve, including human beings who by nature have reasoning abilities which are however not total in the sense that human beings are moved by their passions. Therefore, achieving adequacy of ideas is part of passion-making and is passion-changing. Indeed, desire is the emotion through which one endeavors to persevere in their being, it is not predetermined but rather moving and substitutable. This understanding of the conatus as striving to identify the adequate cause relies on the hypothesis that an individual who would be moved only by their passion would not be able to self-preserve. Indeed, if adequate ideas, "didn't exist, thus if humans were not the cause of any of their actions 'in virtue of its own nature', their affects would immediately conduce to their decomposition and to death"[3] (Balibar & Kelly, 2018, p. 235).

2.3.1 | Specifying the speculative quality of the reflexive conatus

Along with Balibar, Critical Realists also argue for the importance of reflexivity in developing adequate ideas, specifically in terms of the conatus (Collier, 1999; Evenden, 2012). In *Being and Worth* (1999), Collier builds on Bhaskar's philosophy via Spinoza and Saint Augustin to argue for the existence of worth within beings themselves. For humans, this is through the existential impulse to increase their body via their interaction with other beings because adequate ideas are considered as what humans strive to obtain and interaction with others enables greater exposure to ideas (Collier, 1999).

He explains these actions by following Spinoza's ethics in arguing that, "emotions can move us to action […]which can be rational or irrational […rationality is] the tendency to correct thinking,

replacing inadequate ideas by adequate ones, and thus to transform not only our knowledge but also our emotions, since emotions are not blind impulses or feelings, but involve ideas about things" (Collier, 1999, p. 6; 15). Rationality thus refers to the possibility of having identified properly the nature of the object in one's environment, indeed, "[…] her behavior is rational, because it is determined not by her subjective impulse but by her recognition of the nature of the situation outside her. She acts in terms of the nature of the object" (Macmurray, 1935, pp. 20-21 as cited in Collier, 1999, p. 25). Thus, reflecting on the adequacy of ideas is a condition for the possibility of rationality while rationality is always linked to emotion.

Only through reflexive thought can agents develop adequate ideas as, "'in the first place and for the most part', they are ideas belonging to 'random experience', inadequate to their objects, or misassigned to an inappropriate object" (Collier, 1999, p. 34). Following Spinoza's parallelism, Collier argues that,"[…]the mind is the idea of the body […]whereby the body is conceived as […] (1) indefinite boundaries: a matter of more or less part of one, not altogether or not at all part of one; (2) not an exclusive possession, since it overlaps with the bodies of others; (3) capable of expansion and contraction" (Collier, 1999, p. 40). As such, rationality which implies interacting with more things (to facilitate the development of adequate ideas), leads to an extension of the body (through interaction, things become a part of me) parallel to the extension of the mind.

The conatus, "my drive to persist in my being (and to expand my power to persist in my being)" (Collier, 1999, p. 41), is oriented toward the adequacy of ideas. This means the conatus in and of itself is a tendency towards rationality. What's more, rationality is dependent on interaction thus, "the human conatus is not just for the preservation of one's life, but for greater interaction/identification with more and more of being" (Collier, 1999, p. 68). It all goes to say that the capacity to speculate on oneself vis-à-vis one's environment is at the heart of the movement to adequacy which is the presupposition to reflexivity. As such, I consider this the speculative quality of a reflexive conatus.

2.4 | Specifying the contemplative quality of the conatus

Evenden (2012) agrees with Collier's assertion that reflexive thought allows us to increase the adequacy of our ideas which is an increase in understanding the causal nature of our reality. It follows that one has at least in part the power to understand themselves and their affects (Spinoza et al., 2020). This means that through reason, one can thus, "correct (their) pre-reflective ideas and reassign them to their correct objects by revealing what causes their ignorance" (Evenden, 2012, p. 169). It is thus possible to have adequate ideas through reasoning, which is itself dependent on, "engaging in increasingly more difficult tasks […]Interaction allows one to analyze what things have in common, which enable us to describe what constitutes the […]external causes of situations and events and open up the possibility of their explanation" (Evenden, 2012, p. 172).

By building on this acknowledgment of the speculative quality Evenden asserts that the emancipatory potential of Spinoza lies in the identification of the, "nature of the optical illusions that permeate and cloud our consciousness" (Evenden, 2012, p. 174). This is discussed in part within social theory by Archer, 2000, as cited in Evenden, 2012, p. 178 in which her account of emotions, "[…] focuses on changing how we evaluate events via reflexively monitoring the self and revising and reordering one's concerns through inner conversation in light of the commentaries we receive, thereby creating a new 'sounding board' for our emotional 'imports'" (Evenden, 2012, p. 178). Yet, Evenden goes a step further than Archer by arguing that in virtue of coming to understand the nature of the object behind our emotions, one opens the potential for self-transformation as opposed to a simple reordering of one's reflexivity. Thus, one's emotions can be transformed as, "their causal structure is specifically

dependent upon how we perceive and evaluate situations that are intrinsically connected with the conatus (thoughts that affirm an increase or decrease in our power of action)" (Evenden, 2012, p. 176). The conatus thus drives people to analyze certain situations differently, as for instance, "in the event that our power of action is lowered, our striving to preserve our strength then conditions us to project and displace blame onto others" (Evenden, 2012, p. 177).

Herein, Evenden deepens Collier's argument, showing that the conatus is dynamically tied to our emotions AND the full spectrum of our thoughts from adequacy to inadequacy. Indeed, Evenden argues that, "underlying structural mechanisms are created and embedded within the conatus which implicitly condition us by operating in the form of evaluative frameworks that tendentially predispose us towards certain emotional and behavioral responses when relevant emotional cues are perceived" (Evenden, 2012, p. 182). The conatus, "for our intents and purposes may be held to be synonymous with our sense of self-identity emergent from our unique structure of personal concerns" (Evenden, 2012, p. 176).

In addition, the emergence of self-identity as a product of and through reflexive speculation vis-à-vis the conatus implies fixation. This is because identity as a semi-durable thing instantiates speculative reflection over-time. In other words, if reflexivity as speculation enables the revision of one's inadequate ideas, reflexivity as contemplation can transform one's self-identity (Evenden, 2012, p. 174). This means that alongside Balibar, Collier, and Evenden, the conatus for this author is reflexive including the speculative and the contemplative.

2.5 | The consequences of each type of conatus

Each reading of the conatus results in consequences for the possibility and limitation of action within a complex system. On one hand, self-reinforcement is the causal driver to the reproductive conatus where an antecedent object is absent. As such, the reproductive conatus is only reproduced in virtue of itself. On the other hand, the imitative conatus recognizes the object but orients itself around the expressions of that object. Therefore, the desires and passions are born through the imitation of others' expressions of their own essential conatus. It follows that desires and passions are a matter of objectification. Finally, that identity is attuned with one's ability to revise one's inadequate understandings of oneself, and one's material environment means that one can alter the basis of one's passions to begin with. In this sense, not only does one create the object behind one's passion, or objectivate, but when altering one's self-identity through the movement to increased adequacy one is also persevering over one's limitations as well. It follows that the consequence of the third reading is the problématique of perseverance and the possibility of objectivation instead of objectification or self-reproduction.

3 | CONATUS AND FRENCH RÉGULATION: A CASE STUDY ON COMPLEX SYSTEMS

As the forgoing shows, the conatus operationalizes the motivation behind action. This is in terms of the origins of action: the desires and passions, where they come from, and what their relationship is with rationality. This link between rationality and the conatus, if accepted, opens the possibility for a conatus which is reflexive of the material environment of the ideational such that it could even be transformative of itself. It follows from these descriptions that there are three readings of the conatus: inertia, imitation, and reflexive (including speculative and contemplative) with the following

consequences for understanding complex systems respectively: self-reproduction, objectification, and objectivation/perseverance.

This translates for social theory into the debates on a. causality, b. temporality, and c. structure-agency. On one hand, the debates on causality and temporality both speak to the structure of causation (in the former) and time (in the latter) within social theorizing. On the other hand, the structure-agency debate is characterized by the question of whether (social) structure or agency are more causally determinant. Specifically, do social structures determine the actions of humans or vice-versa? The conatus speaks to all three of these debates pre suppositionally to action itself. This is because the conatus operationalizes the conditions of the possibility for action and what kind of relationship it has with humans, their ideas, and their material environment.

It follows that I explore the implications of the conatus for political theory and complex systems by tracing it via the different positions on causality, temporality, and structure-agency embedded within theories of institutional change. To do so I use French Régulation (FR) as a case study. FR is chosen for three reasons. First, it is one of the main heterodox schools in economics and provides analytical concepts to study capitalist systems through Regimes of Accumulation (RoA), Modes of Régulation (MoR), and Institutional Forms (IFs) (Boyer, 2005). As such, FR focuses on institutional architecture, its changes, and stasis as a matter of hierarchically derived institutional complementarities (Boyer, 2005, p. 46; 66). Thus, it is a leading school in international political economy that studies complex systems. Second, Critical Realists such as Jessop (Jessop, 2010; Jessop & Knio, 2019) and Knio (Knio, 2020, 2023) have already applied FR to Critical Realism. Third, the conatus is pervasive in FR research as discussed by Boyer, "[c]ould the "conatus of institutions" be the ruse driving them to conversion […]the conatus as an evolutionary principle (and not only as inertia)" (Boyer, 2003, pp. 180,181).[4] Three strands of FR scholarship are distinguished here by the three different readings of the conatus as already discussed and as bound by the concept of institutional hierarchy. Institutional hierarchy refers to the ex-post, impact of (a) institution(s) over others (Boyer, 2005, pp. 46-47). Boyer distinguishes between two types of hierarchy: hierarchy by design and hierarchy by transformation. Thus, I explore the inertial conatus through hierarchy by design, the imitative through hierarchy by transformation, and the reflexive (including speculative and contemplative) through Morphogenetic Régulation. Each is analyzed in terms of its implications via causality, temporality, and structure-agency.

3.1 | Inertia in hierarchy by design

The inertial reading of the conatus is exemplified by hierarchy by design. This is where, "the conception of some institutional form, the constraints of another central, and hence superior, institutional form, are explicitly or implicitly taken into account" (Boyer, 2005, p. 67). For example, the constraint of fiscally conservative monetary policy forces the labor market to become more flexible (Boyer, 2005, p. 68). In other words, the prerogatives of fiscally conservative monetary policy are imposed on the labor market such that the labor market responds to accommodate these prerogatives without the labor market influencing monetary policy. This is exemplary of isomorphic behavior as already noted by Boyer (2005). An isomorphism is the constraining of diversity amongst institutions leading to their ex-post homogenization due to environmental factors be it normative, institutional, political, or others (Dacin, 1997, p. 48).

Dimmagio and Powell highlight three mechanisms which could produce isomorphisms: coercion, norms, and mimesis. "Coercive isomorphism results from both formal and informal pressures exerted on organizations by organizations upon which they are dependent" (DiMaggio & Powell, 1983, p. 150). For example, isomorphism resulting from a government mandate (via legislative, administrative, and judicial activities) are examples of coercive isomorphisms. These are also

known as vertical isomorphism (Miller & Banaszak-Holl, 2005, p. 200) and it follows that change is affected by policy-makers in the subservient institution responding to the mandate of the dominant institution. In contrast, horizontal isomorphisms, or normative and mimetic, are the results of problem-solving by actors with imperfect information. In the case of mimetic, policy-makers navigate uncertainty through commonly held beliefs and rules (Miller & Banaszak-Holl, 2005, p. 197).It follows that as a response to institutional uncertainty actors look to other institutions as an example for how to navigate this uncertainty. On the other hand, the normative case is when actors wish to be seen as legitimate and thus rely on solutions which are widely considered to be the best-fit for their problem (Miller & Banaszak-Holl, 2005, pp. 197–198). Regardless of the type of isomorphism, actors are reflecting on and reacting to structures which have initiated the change itself and thus the basis of explanation is structural when considered in terms of the debate between agency and structure.

Each mechanism is an explanation for an ex-post (seen after the fact) homogenization of institutions. As an ex-post homogeneity, all isomorphisms are hence the result of a constant causality (Stinchcombe & Merton, 1968, p. 103). Consequently, the homogenization process must already be complete (in terms of creating homogeneity) but ongoing and uninterrupted for so long as there is an isomorphism. Therefore, if one assumes a cause-effect temporal symmetry, the causation of homogeneity as the effect must remain uninterrupted.

In the case of hierarchy by design as is seen in the example, the constant cause, regardless of its isomorphic mechanism, is explained in terms of the relationship between institutions, in other words, the structuration of the network of institutions (Dacin, 1997, p. 49). This means that the relations between the monetary policy regime and the labor market articulate together such that they reinforced themselves positioning and perpetuating the monetary policy regime as dominant over the labor market. That the institutions themselves created and reinforced their hierarchical relations is known as self-reinforcement (Dacin, 1997, p. 49). This is where the genesis of the institution itself is contingent but it becomes determinant (and thus reproductive)-stably reproducing the institution over time (Mahoney, 2000, p. 514; In Mahoney & Thelen, 2009, p. 3) as an ex-post complementarity. *Put differently, the ex-post complementarity in hierarchy by design is best explained by an INUS argumentation: Insufficient but Necessary part of an Unnecessary but Sufficient condition.*

3.2 | Imitation in hierarchy by transformation

The imitative conatus is exemplified in hierarchy by transformation in which, "the transformation of an institutional form guides the development of one or several other institutional forms (Boyer, 2005, p. 68). For example, the internationalization of domestic economies and financialization of governance have led to other transformations such as the trans-national expansion of competition which creates heterogeneity in the labor of other countries (Boyer, 2005, p. 69). This is an example of, "[t]emporally ordered and causally connected events where this causal connection is dependent on prior steps" (Mahoney, 2000, p. 509). I refer to this as historical causality. This concept contributes to path-dependency research by distinguishing from Mahoney's broader understanding in which all path-dependent research is broadly based on unequally weighted, historical causes (Mahoney, 2000, pp. 5-7; 31-34). As previously mentioned, self-reinforcing sequences in path dependent research are based on a constant causality. On one hand, this is indeed, a causality derived from unequally weighted antecedent events in history. On the other hand, examples of transformation as seen here have unequal weighting between each outcome which leads to the transformation of outcomes, even reversing previous events. As such, one specifies the impact on outcomes as a result of the differential weight between every temporally antecedent event as a historical causality. In the example, the

initial transformation of the internationalization of domestic economies or financialization of governance leads to the transnational expansion of competition, while both lead to the heterogeneity of labor while having an unequal causal weight between each other and this final transformation.

If the causal motivation of transformation is a historical event itself, it follows that subsequent events have this same capacity and thus they (counter)react to events creating new events. This is a type of temporality called a reactive sequence in which, "[e]ach event is a reaction to antecedent events and a casuea of subsequent ones" (Mahoney, 2000, p. 526). *It speaks to a SUIN argumentation: Sufficient but Unnecessary parts of an Insufficient but Necessary condition.* In the example, the internationalization of domestic economies and financialization of governance are the reaction, the trans-national expansion of competition is the counter-reaction, creating heterogeneity in labor-the transformation. As already explained, this is distinct from self-reinforcement based on constant causality because here, antecedent events have greater and differential weight than subsequent events and thus create actions and reactions which are novel leading to a chain of transformation which may even reverse earlier events. In contrast, reproduction is in the nature of the initial event as was explained in the example where the monetary regime as necessarily part of a structured network of institutions, was per its nature (as part of this network and the structuring of the network) hierarchically dominant over the labor market and therefore able to self-reinforce.

Historical causality and reactive sequences are exemplified by the theory of agencements (Callon, 2005). The reactive sequences are the moments of entanglement and disentanglement of commercial goods through which agency is co-constructed with structure. According to Callon, "It is common sense: the consumer buys only what he or she wants to buy but, as everyone knows, this will is not already there, it is co-constructed along with the good and with the salesperson and all the professionals of embedding" (Callon, 2005, p. 6). It follows that the co-construction of structure and agency is in terms of not only the framings of a situation for agents but the mechanisms that organize the encounter between agents. Therefore, the meanings within any transaction-entanglements are a logic embedded in the organizing of the market transaction which concludes through disentanglement. Through this reactive sequence, agency (attaching and interacting with meaning-entanglement) is part of the structure (the market) which alters that meaning once the commercial good has been sold (disentanglement) (Callon, 2005, pp. 6–7). As a result of this reactive sequence, one can see that disentanglement is always impacted by the entanglement which was always impacted by previous chains of entanglement-disentanglement. It follows that this is based on a historical causality where the unequally weighted events were previous chain(s) of entanglement-disentanglement and a temporality of reactive sequences in which the entanglement-disentanglement is the transformative action-counter reaction.

This is the same as the concept of institutional bricolage (Carstensen, 2015). Agents play an important role in explicating transformation through a process of mix and matching between the reconfiguration of their skills and the, "collection of oddments left from human endeavors" (Carstensen in Spanakos & Panizza, 2015, p. 48). As such, policymakers use pre-existing institutional principles and practices, without recourse to the causes behind their origins, to respond to the policy issues of the day (Spanakos & Panizza, 2015, p. 49). It follows that pre-existing structures (institutions and their technologies) as the results of previous bricolage are juxtaposed with the skills and experience of the bricoleur in the process of new institution-building: in this ambit, bricolage exemplifie a particular intersection between historical causality, reactive sequences, and the co-construction of structure and agency. For example, "Danish policymakers drew on existing ideas and institutions that were developed in the previous bank crisis of the late 1980s. In this way, pre-crisis ideas and institutions worked as a resource for actors to adjust to radically new circumstances" (Spanakos & Panizza, 2015, p. 56).

This is akin to Amable's understanding of hierarchy by transformation which arises from heterogenous, political interests embedded within social circumstances (Amable, 2016) and is thus also based on the historical embedding of agents. Like Boyer, causality for Amable is based on reactive sequencing and the, "[…] knock-on effects of institutional change in one area for another institutional area" (Amble, 2016, p. 88) and is thus premised on an imitative conatus, at least implicitly. At the heart of Amable's institutional transformation lies the social bloc. This represents unified social groups which may have contradictory interests around a political strategy but have a dominant influence over policy formation (Amable et al., 2021).Within a social bloc, the social groups are hierarchized, and the hierarchy of groups via their political support is reflected in the priority given to certain demands materialized in policy (Amable et al., 2021). Similar to transformation via the agency of the bricoleur, the social block reformulates diverse interests to achieve policy outcomes. As such, the transformation is isomorphic with these norms (Elder-Vass, 2007).

Research by another FR scholar (Lordon, 2010) also discusses the imitative conatus for FR beyond institutional transformation through a historical causality, reactive sequences, and the co-construction of agency and structure. According to Lordon, the conatus is an intransitive impetus and general power, moved towards objects of desire via its actualization, under the effect of external causes (Lordon, 2010). Thus, it is the situation of the individual within a social structure/field that will determine its objects of desire. This means that the conatus moves in imitation of others. In other words, agency is co-constructive of the social field (structure) within which it is enmeshed. He gives the example of the monetary approach by regulationists Aglietta and Orleans. Namely, 1) money is not valuable in itself, in its substance, just like for Spinoza, one does not desire the object for a kind of intrinsic value of that object but rather because one is determined to by external causes; 2) money is generated via mimetic desires, just like one desires an object via imitation of the desires of others, thus identifying the desired object by someone as desirable in itself; 3) money was generated to allow material reproduction and thus for people to persevere in their being.

Boyer goes on to distinguish two mechanisms driving hierarchy by transformation: hybridization and endometabolism (Amable, 2016; Boyer, 2005). On one hand, hybridization is when part of an institution is imported, leading to changes in the imported part as well as the system into which it is imported (Amable, 2016, p. 89). On the other, endometabolism is when the development of tensions within an institutional architecture leads to other changes (Boyer, 2005, p. 70).

3.3 | Conatus, CR and the Problématique of Perseverance: Morphogenetic Régulation

3.3.1 | Morphogenetic Régulation: Calibrating the Conatus

The Immanent Causality Morphogenetic Approach (ICMA) is an ontologically-led model of social transformation predicated on the conjunction of four key ontological debates to explain the systemic persistence of enduring properties in time-space configurations. These four debates are individual-group, structure-agency, material-ideational, and transcendence-immanence (Knio, 2018, 2023). As such, the ICMA combines Archer's Morphogenetic Approach (MA) (e.g. Archer, 1995, p. 2020) with the Spinozian notions of immanent causality inspired by the doctrine of parallelism. The ICMA fully agrees with the tenets of Archer's analytical dualism when it comes to the group-individual and structure-agency debates. Nonetheless, it problematizes the implications of analytical dualism within the material-ideational and transcendental-immanent debates. Applied to FR, a well-known heterodox school of political economy, the subsequent ICMA-FR (Knio, 2020) is now referred to in this paper as

Morphogentic Régulation. Morphogenetic Régulation not only fulfills the condition of possibility for the reflexive conatus discussed in this paper vis-à-vis trans-immanence, but it also operationalizes the two expressive roles of ideas (ideas as self-explication and ideas as adequacy) to understand the interplay of material and ideational structures mediated by people via the double and triple morphogenesis of agency. This operationalization is analytically divided across 3 stratified levels: the conditioning (T1-T2), the interaction (T2-T3), and the elaboration/reproduction (T3-T4-T5). Through these levels, it is possible for researchers to trace the objectivation and objectification of interests as seen under the logic of systemic persistence through the *problématique of perseverance*. The following first discusses why this is a trans-immanent approach, then its engagement with persistence, followed by examples of the speculative moment through ideas as explication, the contemplative through ideas as adequacy, objectivation and objectification, and then examples of both through the augmentation of FR's hybridization and endometabolism.

3.4 | The Doctrine of Parallelism for Morphogenetic Régulation

Morphogenetic Régulation's trans-immanence is grounded on the doctrine of parallelism, translated ontologically into ontological tangentiality (Knio, 2018, 2020, 2023). As previously discussed, this means that attributes are expressed through modes which can simultaneously be the expression of substance from which attributes originate. In turn, modes connect the material and ideational without their elision, not only opening the possibility of reflexivity about the material origins of ideas, but also how ideas operate as objects in shaping the material. This non-elided unison of the material and ideational dispositional capacities is known as the caliber. This means that calibers are the connection behind the forms (institutions, desires, passions, etc) that one sees of the object (substance). It follows that substance is investigated via these calibers with recourse to the forms first. In other words, one can account for the perduration of substance through the exduration of its attributes (Knio, 2023).

Exdurance for Morphogenetic Régulation is an analysis of the sequential, counter-reactions, of emergent transformations which characterize the persistence of a property.[5] It follows that the moments leading up to understanding the perdurance[6] of the property focus on the synchronic forms of the property as opposed to a substance diachronically. This is exemplified throughout the model, starting at T2. This is because T1-T2 is a configurational analysis[7] that seeks to bring out the moment of difference between the internal relations of structures at T1 and at T2. This analysis based on internal relations is an example of exduration because the transformation at T2 is derived without understanding the necessary relations behind the difference between internal relations. A good empirical example is the change between Fordism and neoliberalism. *Through the problématique of hierarchy* (Knio, 2020), the researcher can see the movement of institutional hierarchy: from a hierarchy based partially on the wage-labor nexus under Fordism at T1 towards its replacement with the insertion of the state into the global economy and destabilization of the wage-labor nexus within neoliberalism at T2 (Boyer & Durand, 1997, pp. 9,16,22). It follows from this analysis that one can see a difference between the internal relations[8] amongst the ensemble of IF's at T1 and T2.

3.4.1 | The speculative and ideas as explication

Thus, the proceeding analysis is one tracing the counter-relations from the initial difference of internal relations between T1-T2. This starts from a process of speculation: the iterative reflecting on self-and-circumstance enabling the revision of inadequate ideas. Within this process ideas necessarily

explicate themselves towards adequacy which is a precondition for the fixity enabled by the continuous and dynamic contact with the transformative speculation characteristic of contemplation. Once achieved, this enables objectivation followed by objectification all of which are the steps and processes explaining the problématique of perseverance.

As such, exduration is first captured when the difference situation created at T2 elicits a series of transformative and temporally sequenced counter reactions between T2-T3, known as the interaction phase in a morphogenetic lexicon. This moment is where the difference of internal relations is a break in continuity and thus, "[…] this newfound instability leads to social action […]in a Weberian sense whereby the moment of activation denotes when particular social agents begin to re-orient their actions to other social agents […]" (Knio, 2020, p. 473). As a result, the temporality at T2 ushers a burgeoning number of corporate agents (corresponding to the shrinking of primary agents from T1) who react to the structural (in) compatibilities at T2. This is through their reorientations towards the situation and towards others (Knio, 2020, pp. 473–475).

This Weberian social action interpretation of agency denotes how those corporate agents purposefully construe meanings by speculating on their new environments. In so doing, they embark on a transformative process where they re-imagine their values, ideas, and interests about their life chances through this speculation. This is what Archer refers to as 'the double morphogenesis of agency[9]: "where agency undergoes transformation, acquiring new emergent powers in the very process of seeking to reproduce and transform structures" (Archer, 1995, p. 190). This transformational sequence in itself elicits another counter reaction where corporate agents endeavor now to comprehend rather than just apprehend the construction of their new positioning vis-à-vis the structural (in)compatibilities at T2. In doing so, corporate agents attempt to make sense of their past and immediate milieux by explicating the double morphogenesis of their agency against the background of T2. This sequential movement from sense construals to sense making constructions enables researchers who are observing this process to analyze how these agents, through the iterative nature of speculation, explicate their awareness of the institutional forms of their past and present milieux against the background of (in) compatibilities accrued at T2. In other words, researchers and/or observers can now analyze whether the agents' behavior explicated by their ideas are deemed to be necessary or contingent in relation to the (in)compatibilities at T2.

This permits the construction of Archer's situational logics[10] (Archer, 1995) in ideational and material terms at T3 which denote in themselves whether morphogenetic or morphostatic processes are taking place. More importantly, they explicate how material and ideational dispositional capabilities (Modes of Growth–MoG and Modes of Regulation–MoR respectively) are emergent forms of material and ideational dispositional capacities (Growth Regimes–GR and Regulation Regimes–RR respectively).[11] It follows that after T3 there is a counter-reaction to the explication of ideas. Therein, there is an ongoing speculation on the synchronic forms of agents' selves, millieux, and others' reactions leading to another change in reflexivity for corporate agents. Another example of speculation through exduration, which is characterized by the necessarily inadequate, is shown after T3 during which Archer postulates four possible derivations of reflexivity for corporate agents (Archer, 1995).[12] These capture the (dis) junctions between material and ideational morphostasis/morphogenesis and fostered by a welter of actors' reflexivities.

3.4.2 | Contemplation and ideas as adequacy

If T1-T3 out of 5 were exdurational and thus exemplified the inadequate and explicative ideas characteristic of speculation, then moving closer to T4 is the beginning of adequacy and the precondition for

contemplation. Thus, actors are embedded in corporate agency via the triple morphogenesis of agency[13] and are newly transformed in their dispositional capabilities to be aware via one of the four reflexivities. This means they can now reflect on the totality of difference in the change they have been confronted with. In other words, they take cue from the knowledge accrued in exduration but make a transcendental leap in their thinking which is an insight into the immanent cause that makes the internal relations of T1.

As such, being able to make comparisons *in time*, about *difference over time*, means that the ideas have gained adequacy[14]. In virtue of this adequacy the researcher moves through the exdurance-based analysis to perdurance: knowledge of the substance behind the forms. This is because adequacy necessarily implies a knowledge of the position of the idea in relation to the immediate contextual surroundings, and more significantly, of the mechanisms at play at an even deeper level" (Knio, 2018, p. 12). The loci of these deeper mechanisms must always be within the unactualized mode, known as a caliber (the ontological tangentiality of material and ideational dispositional capacities), as they are withheld from the attributes. The process in which agents come to know the calibers and have their desires, passions, and more broadly interests come to be adjusted accordingly is the calibration of the conatus. In other words, "[t]his is corporate agents [reflecting] on what must have been necessarily withheld (substance) in order for the forms (attributes) of their milieux to be as they are, enabling agential action" (Knio, 2023, p. 20).

In addition, the process of calibrating the conatus allows us to analyze the loci of the conatus and thus the objectivation of interest (between T4 and T5) and how this object comes to be objectified and then expressed through affects such as emotions, passions, and desires in a new morphogenetic cycle. Thus, as the ideas of corporate agents become more adequate, their reflexivity leads to changes in their desires and passions (or interest). This transformation of interests, as part of the speculation which informs perception of self and the basis of that perception, creates a new self-identity and thus, fixes the adequately conceived ideas into the conatus as contemplation. In other words, the reflexive (including contemplative and speculative) conatus presupposes the objectivation of an interest, or the object behind desires and passions, in terms of an iterative movement between perception of self, perception of self's relationship with the environment, the environment itself, and in between each at T5. Therefore, the creation of the interest-objectivation of the object-is the fixing (stable creation of an object which engages in the forgoing process of its objective capacities).

3.5 | Re-embedding the analysis in Morphogenetic Régulation

Reflexivity, speculation, and contemplation are exemplified by the analysis of hybridization and endometabolism via Morphogenetic Régulation. Specifically, reflexivity through speculation and contemplation is an iterative movement between the perception of a complex system, its environment, and the complex system itself. More concretely, this means that the iteration between the three forgoing is a process of learning for corporate agents leading to ex-post changes in institutions. It follows that hybridization as the tentative importation of institutions creating a new institutional form (Boyer, 2005, p. 70) is a change which must have been preceded by a learning process for corporate agents enabling them to affect change. According to Morphogenetic Régulation, this change is affected by corporate agents' recognition of the necessarily withheld, explaining the nature of their environment and their relationship with it such that they could affect agential change. In other words, this is an example of endometabolism–the development of tensions within an institution which are enabled and precipitated by corporate agents adequately understanding the nature of change in the context of the institution itself and explicating on its contradictions. Therefore, hybridization and endometabolism are not only temporal orderings within hierarchy by transformation but are temporally ordered between each other.

The possibility of perceiving tensions is preceded by an awareness of (but not necessarily conscious engagement with) the basis of tension within the system and thus the nature of the system itself. This is where the necessarily withheld comes into play. Social actors embedded in agency reflect during the triple morphogenesis on what must be within the institutional configuration. This enables and motivates change via the recognition of what precedes tension and tension creation. Once the tension is created, as the backdrop to institutional change, it is the object behind the desires for change. In other words, endometabolism at T4-T5 is the moment of objectivation. It follows from the objectivation of interest, or in the case of FR, the development of institutional tensions that ways of resolving tensions emerge. These resolutions, or tentatively imported institutional configurations, are put forth by corporate agents as responses to tensions while not informed by the nature of the tensions (the transcendentally withheld object behind the tensions). Thus, hybridization as an attempt to resolve institutional tensions without knowing their substance is objectification. According to Boyer, examples of endometabolism and hybridization are found in the augmentation of Japanese capitalism through the birth of Toyotism as a moment of endometabolism. This new formulation of industrial production known as Toyotism was born out of the tensions produced by the war and its results which was preceded by the innovation of American Fordism. The interaction between the new Toyotism and American Fordism is an example of hybridization in which both were altered, leading to a new period of institutional tension–endometabolism: the structural crisis of American Fordism. Born of this endometabolism is the new system of financialization (Boyer, 2005, p. 19). Thus, not only is hybridization always preceded by endometabolism, but the relationship is dynamic such that old endometabolisms (for example, American Fordism in the first instance) affect new hybrdiziations.

4 | IMPLICATIONS AND CONCLUSION

This paper follows previous research which discusses merging Critical Realism with complexity and systems theory (Knio, 2023). It accepts the premise and critiques laid out in that piece, namely that the current understanding of autopoietic systems alone cannot achieve this merging. This is because the current understanding of self-reproduction lacks a logically consistent causal explanation of how a system is produced (as opposed to only reproduced). This means that one cannot discuss complexity–made of both autopoiesis and allopoiesis and thus cannot discuss real complex systems in CR. In response, this author proposes a calibrated understanding of substance within the environment of complex systems juxtaposed with a trans-immanent philosophy. In so doing, this author contributes to Bhaskarian and Archerian CR's emphasis on properties and an emergentist ontology. This moves past the impasse between autopoiesis and allopoiesis thus merging emergent causality with an emphasis on meaning.

This is operationalized by the Spinozian conatus. I distinguish between three readings of the conatus: inertial, imitative, and reflexive (including contemplative and speculative). While the inertial conatus is critiqued for its determinism, the imitative is considered too mechanical. I position myself within the reflexive conatus. This is because a reflexive conatus considering the Spinozian understanding of adequacy which informs calibration, enables the possibility of objectivation, not only the objectification of interest. This, the first contribution of this paper, means that complex systems can reflexively orient themselves in the construction of their own interest in ways which empower them ultimately leading to the objective creation of a new identity–the object, or motivation, behind action.

All three conatuses are applied to FR as a case study on complex systems. Morphogenetic Régulation is identified not only as an exemplar of the reflexive conatus but also of complex systems within this complex system. This is because it goes beyond historical, constant, and reactively sequential

causes to explicate on the immanent causes of interest. Through this application of the reflexive, calibrated conatus to Morphogenetic Régulation I offer a second contribution showing not only that the conatus entails persistence as the classic literature states, but also the problématique of perseverance–the (re)production of the self as empowerment.

This approach contributes to IPE in four ways. The first it is through a renewed understanding of the system and the environment in and of themselves. Through the problématique of **systemic persistence as perseverance** one can investigate the contingencies of transformation and reproduction of complex systems without subverting one for the other. In so doing, one can analyze a dynamic relationship between the environment of a complex system and the system itself. This shows that complex systems (and thus identities) can change in (dis)empowering ways by reacting to their environment while still being what they are. This perspective allows the researcher to discuss the reproduction of a complex system AND environmental impacts on that complex system without giving arbitrary ontological primacy to one or the other. Further, it enables a nuanced account of how complex systems change in and over time relative to their environments. This means that one sees the complex causality between the system and its environment, probing the necessary relations within and between each, instead of Luhmann's unilateral focus on the boundaries of the system itself.

Second, the problématique of persistence as perseverance radically contests two types of temporally based causal explanations. It does so by challenging the mutual exclusion between the underlying distinctions of constant and historical causes. On one hand, the logic that enables a constant cause requires an ex-ante essentialist understanding of properties that are self-reinforced over time. In this case, the continuity/change of a thing is accrued either in virtue of its self-reinforcement or lack of it. On the other hand, the logic that enables historical causes is rooted in transformative reactive sequences. In practical terms, they are exdurantist and cannot deal with properties and absence. In IPE, these accounts either champion path shaping analyses (Blyth, 2003) or dialectic path dependent-path shaping ones (Hay, 2002). While these approaches predominantly favor synchronic over diachronic analyses, they often refute the existence of a property in and of itself. In so doing, their analysis is often squarely rooted in an immanent understanding of substance and consequently cannot deal with the transcendental nature of substances/objects manifested in their immanent context, a feature that is central to Bhaskar's CR philosophy. In contrast, the problématique of perseverance juxtaposes the contingently necessary with the necessarily contingent. In so doing, it highlights the two types of necessity: necessity of difference (as explained from T1 to T3) and the necessity behind contingency over time as explained through the trajectory from inadequacy to adequacy. In short, by juxtaposing what was previously a mutual-exclusion, we can see the temporality of contingency and necessity, and their interactions such that complex systemic reproduction can occur.

Third, I contribute to concrete analyses of capitalism through my application of the conatus and its discussion to the French Régulation approach. I agree with Boyer's starting point that nothing should be ex-ante and everything is ex-post. But I look at ex-post not in terms of coherence and compatibility. Instead, I take change and difference as the starting point. This opens the possibility for a nuanced investigation of institutional change in and over time without subverting one for the other and ultimately allowing researchers to celebrate systemic persistence as perseverance. This is exemplified in Morphogenetic Régulation which is instead based on a transcendental philosophy and immanent causality, allowing researchers to investigate how a system persists, and thus any identity, through the empowering, change of itself. This means that, while the forgoing accounts deal with transcendence OR immanence and both talk about enduring properties, Morphogenetic Régulation engages with both, juxtaposes them, and deals with mixing exdurance with perdurance. As a result, Morphogenetic Régulation potentiates renewed understandings of institutional reproduction that sheds light on complex and nuanced understandings of its relationship with the political economy.

Fourth, I show how one can analyze objective interests and their objectification. In other words, I show that how it is possible to understand an interest as an object in and of itself (objectivation–objective creation of an object) as well as the social construction of interest (objectification). This is through the application of a reflexive, including speculative and contemplative conatus to Morphogenetic Régulation. This application shows the temporal distinction between objectivated interests and objectified interests. This means that objectivated interests in the conditioning phase guide the objectification of interest in the interaction phase. Thus, in the FR lexicon, endometabolism necessarily precedes hybridization. This allows the researcher to understand institutional change in terms of how corporate agents objectivate interests leading to the objectification of interests and thus transformation of institutions.

ACKNOWLEDGEMENTS

I would like to thank Margaux Schulz and Daniel "Zach" Sloman for their research and editorial assistance in preparing this article. I also would like to thank the anonymous reviewers for their comments and feedback. All misrepresentations and omissions are my own.

ORCID

Karim Knio https://orcid.org/0000-0001-6862-052X

ENDNOTES

[1] "Calibers heuristically specify the relations within the relations between modes and substance and modes and attributes. This means that they are qualities highlighting a relation that indicates a, unifying modification of substance and/or a relation indicating a modification of substance that necessitates relationality" (Knio, 2023, p. 17). The nature of this union, the caliber, is derived from a logic of ontological tangentiality between the material and ideational where the former empowers the latter. This occurs without reducing the ideational to the material. "Examples of calibers from social theory are dispositional capacities (a relation expressing unity) and capabilities (a relation expressing relationality)" (Knio, 2023, p. 17).

[2] "Specifically, Luhmann accepts that there is no system without its environment and instead focuses on [perturbating] events within the boundaries of systems. This has contributed to a renewed focus on boundaries within other literatures such as process tracing (e.g. Beach and Pedersen 2019) [that identify causal mechanisms within those boundaries]" (Knio, 2023).

[3] Original text: "Si elles n'existaient pas, si donc l'homme n'était cause d'aucune de ses actions « en vertu de sa nature propre », ses affections conduiraient immédiatement à sa décomposition et à la mort » (Balibar & Kelly, 2018, p. 235).

[4] Original text: "Le "conatus des institutions" serait-il la ruse qui la pousserait à la conversion ?"(Boyer, 2003, p. 180)."Le conatus comme principe d'évolution (et pas seulement d'inertie)"(Boyer, 2003, p. 181).

[5] "The attributes and modes of substances do exist synchronically–they exdure–only existing as a matter of the here and now. This is within time, what actualizes, and what is necessarily actualized in the Spinozian sense (Knio, 2023, p. 13).

[6] "This means that substance can never be actual but must be a diachronic phenomenon and never actually experienced. This has two implications for persistence. On one hand, this means substance persists as perduration because it must exist as the conditions behind the conditions of attributes and modes but can never actualize. In other words, the nature of substances as meta-conditional to attributes and modes simultaneously necessitates their presence diachronically and their absence synchronically" (Knio, 2023, p. 13).

[7] "IFs represent an ensemble of institutional complementarities exhibiting specific configurational hierarchies mirroring the 'internal coherence' of a given social system over certain periods of time (Amable, 2016; Knio, 2020, p. 470).

[8] "The contingent necessity relation, or the internal relation of a durable entity, is synchronic in CR since there are no necessary reasons as to why different features come together, but once they specifically gel, they necessarily give rise to another phenomenon" (Knio, 2020, p. 469).

[9] "'[D]ouble morphogenesis', where agency undergoes transformation, acquiring new emergent powers in the very process of seeking to reproduce and transform structures. For in such structural and cultural struggles, consciousness is raised as collectivities are transformed from primary agents into promotive interest groups; social selves are re-constituted as actors personify roles in particular ways to further their self-defined ends; and corporate agency is re-defined as institutional interests promote re- organization and re-articulation of goals in the course of strategic action for their promotion or defence. All the above processes are reinforced or repressed by the overall state of systemic integration, whose incompatibilities foster their actualization and whose coherence serves to contain this transformative potential of agency" (Archer, 1995, pp. 190–191).

[10] "We can observe the results of the double morphogenesis of agency, which usually occurs in the middle of T2-T3, in the four resultant situational logics that Archer proposes to characterize structural and cultural interactions[…]. These situational logics are derived from the juxtaposition of internal necessary relations with external contingency on one hand, and an analysis as to whether such interactions are complementary or incompatible on the other"(Knio, 2020, p. 475).

[11] Please see Knio (2020) for further examples using MoR, MoG, RR, and GR.

[12] "1. A junction between structural and cultural morphostasis (Archer, 1995, p. 308 ff). Thematically, Archer refers to this as contextual continuity which influences social actors to predominantly foster a communicative reflexivity[…;]2. A disjunction between structural morphostasis and cultural morphogenesis. Thematically, she refers to this as contextual discontinuity influencing social actors embedded in corporate agency to foster a predominantly autonomous reflexivity[…;]3. A disjunction between structural morphogenesis and cultural morphostasis. Thematically, she refers to this also as contextual discontinuity influencing social actors embedded in corporate agency to develop a dominant autonomous reflexivity[…;]4. A junction between structural and cultural morphogenesis. Thematically, she refers to this as contextual incongruity influencing social actors embedded in corporate agency to predominantly foster a meta reflexivity" (Knio, 2020, pp. 481-482).

[13] "[H]ow social actors, influenced by structural and cultural actions in the previous level reflect upon their environment and reflexively aim to define it"(Knio, 2020, p. 479). This means that through the reshuffling of collectivities and emergence of new ones via the double morphogenesis of agency, "the particular social identities of individual social actors are forged from [these] agential collectivities in relation to the array of the organizational roles which are availble in society at that specific point in time"(Archer, 1995, p. 256).

[14] This is based on the postulated nature of ideas such that their power in affecting their environment is derived from their adequacy with that environment. In other words, "[…]the power of any idea depends on its ability to engage the world in ways that are persistent" (2010: 69).

REFERENCES

Amable, B. (2016). Institutional complementarities in the dynamic comparative analysis of capitalism. *Journal of Institutional Economics*, *12*(1), 79–103. https://doi.org/10.1017/S1744137415000211

Amable, B., Palombarini, S., & Broder, D. (2021). *The last neoliberal: Macron and the origins of France's political crisis*. Verso. (English-language edition).

Archer, M. (1995). *Realist Social Theory: The Morphogenetic Approach*. Cambridge University Press.

Balibar, É., & Kelly, M. (2018). Philosophies of the Transindividual: Spinoza, Marx, Freud. *Australasian Philosophical Review*, *2*(1), 5–25. https://doi.org/10.1080/24740500.2018.1514958

Bhaskar, R. (1998). Critical realism: Essential Readings. In M. Archer, R. Bhaskar, A. Collier, T. Lawson, & A. Norrie (Eds.), *Centre for Critical Realism*. Routledge. https://doi.org/10.4324/9780203706237

Bhaskar, R. (2008). *Dialectic: The pulse of freedom*. Routledge.

Blyth, M. (2003). Structures Do Not Come with an Instruction Sheet: Interests, Ideas, and Progress in Political Science. *Perspectives on Politics*, *1*(4), 695–706. https://doi.org/10.1017/s1537592703000471

Boyer, R. (2003). Les analyses historiques comparatives du changement institutionnel: Quels enseignements pour la théorie de la régulation? Association Recherche et Régulation Éd. *L'Année de la régulation*(7), 167–203.

Boyer, R. (2005). Coherence, Diversity, and the Evolution of Capitalisms—The Institutional Complementarity Hypothesis. *Evolutionary and Institutional Economics Review*, *2*(1), 43–80. https://doi.org/10.14441/eier.2.43

Boyer, R., & Durand, J.-P. (1997). *After Fordism*. Palgrave Macmillan UK. https://doi.org/10.1007/978-1-349-14027-5

Callon, M. (2005). Why virtualism paves the way to political impotence: A reply to Daniel Miller's critique of "The laws of the market.". *Economic Sociology: European Electronic Newsletter*, *6*(2), 3–20.

Carriero, J. (2011). Conatus and Perfection in Spinoza1: Conatus and Perfection in Spinoza. *Midwest Studies In Philosophy*, *35*(1), 69–92. https://doi.org/10.1111/j.1475-4975.2011.00216.x

Carstensen, M. (2015). Institutional bricolage in times of crisis. *European Political Science Review*, *1–22*.

Cilliers, P. (1998). *Complexity and Postmodernism: Understanding Complex Systems*. Routledge.

Collier, A. (1999). *Being and worth*. Routledge.

Dacin, M. T. (1997). Isomorphism in context: the power and prescription of institutional norms. *Academy of Management Journal*, *40*(1), 46–81. https://doi.org/10.2307/257020

DiMaggio, P., & Powell, W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, *48*(2), 147–160. https://doi.org/10.2307/2095101

Elder-Vass, D. (2007). Reconciling Archer and Bourdieu in an Emergentist Theory of Action. *American Sociological Association*, *25*(4), 325–346. https://doi.org/10.1111/j.1467-9558.2007.00312.x

Evenden, M. (2012). Critical Realism in the Personal Domain: Spinoza and Explanatory Critique of the Emotions. *Journal of Critical Realism*, *11*(2), 163–187. https://doi.org/10.1558/jcr.v11i2.163

Hay, C. (2002). *Political Analysis: A Critical Introduction*. Macmillan Education UK. https://doi.org/10.1007/978-0-230-62911-0

Jessop, B. (2010). Cultural political economy and critical policy studies. *Critical Policy Studies*, *3*(3–4), 336–356. https://doi.org/10.1080/19460171003619741

Jessop, B., & Knio, K. (2019). *The pedagogy of economic, political and social crises _ dynamics, construals and lessons*. Routledge.

Knio, K. (2018). The morphogenetic approach and immanent causality: A spinozian perspective. *Journal for the Theory of Social Behaviour*, *48*(4), 398–415. https://doi.org/10.1111/jtsb.12181

Knio, K. (2020). Critical realist encounters: Morphogenizing the French régulation approach. *Journal for the Theory of Social Behaviour*, *50*(4), 462–489. https://doi.org/10.1111/jtsb.12253

Knio, K. (2023). Complexity, trans-immanent systems and morphogenetic régulation: Towards a problématique of calibration. *Journal of Critical Realism*, *22*(5), 790–812. https://doi.org/10.1080/14767430.2023.2264139

Lordon, F. (2010). *Capitalisme, désir et servitude: Marx et Spinoza*. La Fabrique.

Lordon, F. (2013). Pour un structuralisme des passions. *Tracés*, *13*(#13). https://doi.org/10.4000/traces.5694

Lordon, F., & Ash, G. (2014). *Willing Slaves of Capital: Spinoza and Marx on Desire*. Verso.

Mahoney, J. (2000). Path Dependence in Historical Sociology. *Theory and Society*, *29*(4), 507–548. https://doi.org/10.1023/a:1007113830879

Mahoney, J., & K. Thelen (Eds.), (2009). A Theory of Gradual Institutional Change *Explaining Institutional Change* (1st ed., pp. 1–37). Cambridge University Press. https://doi.org/10.1017/CBO9780511806414.003

Melamed, Y. (2018). *Spinoza's Political Treatise: A Critical Guide: "When having too much Power is Harmful? Spinoza on Political Luck*. Cambridge University Press.

Miller, E. A., & Banaszak-Holl, J. (2005). Cognitive and Normative Determinants of State Policymaking Behavior: Lessons from the Sociological Institutionalism. *Publius: The Journal of Federalism*, *35*(2), 191–216. https://doi.org/10.1093/publius/pji008

Mingers, J. (2006). *Realising Systems Thinking: Knowledge and Action in Management Science*. Springer.

Rouette, A. (2019). The Shortcomings of a Concept Inertia and Conatus in the Philosophy of Spinoza. In K. Kujawińska Courtney, A. Miksza, T. Fisiak, & G. Zinkiewicz (Eds.), *What's New in the New Europe? Redefining Culture, Politics, Identity*. Wydawnictwo Uniwersytetu Łódzkiego. https://doi.org/10.18778/8142-286-4.36

Spanakos, A., & Panizza, F. (2015). *Conceptualising Comparative Politics*. Routledge.

Spinoza, B. de, Eliot, G., & Carlisle, C. (2020). *Spinoza's ethics*. Princeton University Press.

Stinchcombe, A. L., & Merton, R. K. (1968). *Constructing social theories*. Harcourt, Brace & World.

How to cite this article: Knio, K. (2024). Calibrating the conatus in morphogenetic régulation: Towards a problématique of perseverance. *Journal for the Theory of Social Behaviour*, 1–20. https://doi.org/10.1111/jtsb.12408