Structural, Speculative, and Critical Realism: Navigating the Shoals

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Abstract:

Social Theorists who wish to embrace a materialist and realist philosophy are, at present, confronted with a dazzling variety of forms of philosophical realism. Many analytical philosophers, physicists, and mathematicians choose to work within the Structural Realist tradition[1]. In contrast, the 'speculative turn' towards a variety of new forms of Realism was given impetus by *Speculative Realism* event held in April 2007 at Goldsmith's college, London. In this paper, I provide an overview of these three traditions by situating them in the milieu of post-Kantian critical philosophy. To make this somewhat heroic task more manageable I focus on various manoeuvres that have been adopted to advance beyond the seductions of the Kantian "Circle of Objectivity"; specifically, in the

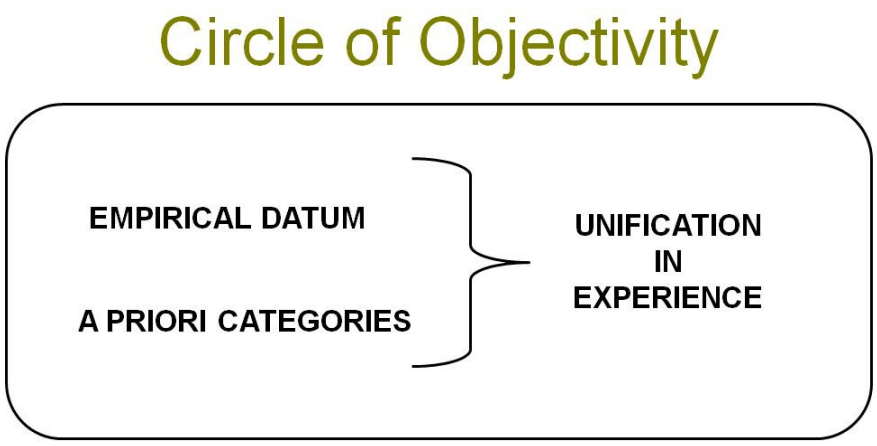
[1] In contrast, many continental philosophers with Marxist sympathies adhere to the Critical Realist tradition of Roy Bhaskar.

approaches taken up by Quentin Meillassoux, John Worrall, and Alfred North Whitehead. These approaches are evaluated in regard to the philosophical manner of their proposed escape from the Circle of Objectivity, and the particulars of their chosen methodology.

Key Words: Realism, Process Philosophy, Psychoanalysis, Post-Kantian

Introduction—the Circle of Objectivity

This paper will compare the more Speculative Realist Philosophy of Alain Badiou with Structural Realism and the Process Philosophy of Alfred North Whitehead. The starting point for an enquiry into these competing conceptions of 'Realism', will be what Quentin Meillassoux chooses to call the Kantian "Circle of Correlationism" or "Circle of Objectivity". By unifying both empirical data and the categories of understanding within experience, the Kantian Circle of Objectivity would seem to afford the only secure ground for any possible knowledge of the world. Each of the philosophies to be considered below attempt, in their own way, to subvert this Kantian Circle.



Meillassoux's efforts at subversion have been clearly set out in a recent paper, wherein he seeks to defend his own position against criticism mounted by Ray Brassier, who argues that Laruelle's 'non-philosophical' conception of the Real (as something which evades conception but can still be thought) affords a more acceptable subversive vehicle than Meillassoux's preferred 'principle of factiality' because Laruelle's philosophical

stratagem is situated "outside the Circle" the latter stratagem remains trapped "within the Circle".

To successfully defend himself against this objection, Meillassoux turns the cannons of Fichtean critique against the ship's officers: namely, both Laruelle and Fichte himself. To this end, Meillassoux deploys Fichte's most powerful weapon—pragmatic contradiction—which achieves its critical purpose by highlighting the dichotomy between what people *say* they are doing and what they are actually *doing*. In his attack on the *Critique of Pure Reason*, for example, Fichte focuses on Kant's claim that , through the schematism of time and the transcendental deduction, both the empirical data appearing within the manifold of sensation and the *a priori* categories of understanding can be woven together to arrive at legitimate knowledge of what we experience. In contrast, Fichte constructs his own system through philosophical reflection, which supposedly exceeds the limitations of Kant's philosophical frame: the Circle of Objectivity. As Meillassoux reveals, the basis of Fichte's concerns are straightforward: he contends that Kant is unable to explain, on his own philosophical terms, how he could write the *Critique of Pure Reason*![2]

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[2] More specifically, for Fichte, this contradiction resides in the gap between what Kant claims to have accomplished—a defence against both Human skepticism and Berkeley's dogmatic idealism—and what he actually accomplishes—an incomplete critique that is unable to explain how the schema of temporality can effectively bridge the gap between the *noumenal* world of the categories of understanding and the *phenomenal* world of sensibility (Beiser, 2002). Not only does Fichte abandon Kant's notions of the thing-in-itself and the manifold of sensation, he also resolves the antinomy characterizing the impossible

In turning against both Fichte and Laruelle, Meillassoux nevertheless proceeds to argue along lines similar to those of Fichte. He suggests that both Fichte and Laruelle have only apparently placed themselves *outside* the Circle because they depart in their "doing" from what they are "saying" precisely insofar as their notion of an 'outside' is one that is clearly *posited* (and as such must be situated, through this very positing, *inside* the Circle). This "performative contradiction between 'saying' and 'doing'" is the instrument that Meillassoux deploys in subverting both the Kantian critique of realism and that of idealism. While the former is predicated on arguments based on the circle of correlation the latter draws on what Meillassoux calls the 'argument from facticity' (and to differentiate it from his own subversions, he refers to it as the 'principle of factiality'). The argument from facticity claims that idealism comes adrift on the impossibility of providing any ultimate ground, cause, or law for existence. For the correlationist, however, everything is conceived as contingent (i.e. dependent on human tropism) *except* contingency itself. In other words, one cannot be sceptical towards the very operator of skepticism. Meillassoux rejects this mistaken effort to cling to the last remnant or anchor of certainty.

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relationship between understanding and sensibility by privileging *practical* reason over a more narrowly narrowly conceived *theoretical* reason. Meillassoux also rejects the notion of an unknowable or unthinkable 'thing-in-itself', which, for Kant was the extrinsic source of our passive sensations. For Meillassoux, as explained below, the real can be thought and known, but it can only be known in its absolute contingency.

For Ray Brassier, Laruelle's Real "One" is conceived as the infinitely effable, real condition of any thinking, but as it is always-already given prior to conceptualisation it is entirely foreclosed to the dualisms of philosophy. To constitute an alternative to what is afforded by both Fichtean 'Subjective Idealism' and Laruelle's 'non-philosophy', Meillassoux invokes the 'principle of factiality', which simply declares (while simultaneously taking to its ultimate conclusion) the "[...] lack of reason of any reality, that is, the impossibility of giving an ultimate ground to the existence of any being" (Meillassoux, 2007: 428). Where Descartes sought to ground the certainty of knowledge in the *cogito* (the "I think") Meillassoux observes (following a precedent set by Jacques Lacan) that this ambit could never serve as the grounds for absolute necessity, because it is not necessary *that* I should think (as Lacan would have it, the Unconscious thinks there where I am not, and where I am it does not think). Instead, Meillassoux contends that we must discover truth *within* the Circle, through the refutation of both Objective Idealism and Vitalism on the basis of the impossibility of any 'ultimate ground' to existence.

This return to a radical, quasi-Humean scepticism, however, is difficult enough to reconcile with the axiomatic powers of mathematics, let alone with the objectives of

scientific research[3]. Accordingly, it is to the philosophies of science that we now turn to see how they navigate the treacherous terrain of the Circle of Objectivity.

Speculative Realism

Structural Realism takes on the somewhat limited role of serving as a "handmaiden to science" by recognising the importance of two fundamental problems which must be overcome for an evolving scientific practice. First, there is the 'No Miracles Argument' [NMA] as set out by John Worrall (1989), which stipulates that realism is only philosophy that does not make the success of science a miracle. Second there is the 'Pessimistic Meta-induction Argument' [PMIA], which accepts inductive evidence that current theories are likely to be discarded despite their current success (the dual to this principle is the 'Optimistic Meta-induction Argument' [OMIA], which accepts evidence that if current theories are false they too will be discarded despite their current success).

Structural Realism has two main tributaries. On one hand there are epistemic structural realists (ESR) who state that we cannot know individuals (noumena) that instantiate structures of world but we can either know their properties and relations, or their relational properties as represented by first order logic (if not ultimately, second order

[3] In his more recent work, Meillassoux attempts to discover a vehicle for consistency in our dealings with the Real through invoking the 'figures' of mathematics. An example of such a figure is the principle of non-contradiction.

logic). On the other hand there is Ontic Structural Realism (OSR) which, in turn, has three main varieties: eliminativists argue that there are no individuals but there is relational structure (i.e. *relata* as such are not individuals); Platonic eliminativists state that the world of appearances is not proper content of knowledge. Alternatively, there are those who argue that *relata* are, in turn, relations which are in turn relations, and so on, so that it is a question of "relations all the way down. Particularists argue that there are relations, but that these do not supervene on the intrinsic (spatiotemporal) properties of their relata[4]. Finally, there are those who argue against particularism, on the basis of structural invariances; or that individual objects have no intrinsic natures so that all individuals of a particular kind are identical[5].

Structural Realism is constrained most obviously (and trivially) by its role of being a philosophy of science (and unlike Critical Realism, does not advocate an ethical philosophy). As such, questions of metaphysics, ethics, or aesthetics are displaced by its

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[4] Whitehead follows Leibniz in asserting the monadic uniqueness of *relata* (actual occasions). Dipert (1997) draws on the notion of asymmetric graphs to provide a formal representation of how this uniqueness might be conceptualized: his example, each vertex (i.e. the *relata*) can be uniquely identified by the overarching structure (that of an undirected graph of edges and vertices, while objects can be viewed as subgraphs enclosed within the asymmetric graph).

[5] See Floridi (2011) for a convincing attempt to reconcile both the ontological and epistemological versions of structural realism.

epistemological efforts to explain the success of scientific praxis in structural terms[6]. In contrast, as will be explained below, the process philosophy of Whitehead subsumes epistemological considerations within an ethical and aesthetic frame, to avoid what Whitehead describes as the bifurcation of nature[7].

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[6] Critical Realists, for their part, pursue an implicitly ethical philosophy insofar as they emphasize the fact that social systems are open rather than closed, and this, largely because our ideas about the world become, in themselves, a causally effective part of the social system. As such, when we change our conceptions of the world we have the ability to transform the social system. Nevertheless, in an important sense, both their ethical and their metaphysical positions are effectively subsumed by a science-driven epistemology. In addition, they have difficulty explaining the structural linkages holding between 'underlying mechanisms' and 'processes of actualisation', which condition the experiences of those scientists attempting to unravel these mechanisms (for his part Bhaskar instances Marx's notion of commodity fetishism s his key example of a latent mechanism) .

[7] Similarly, Alain Badiou achieves the same end through his championing of an ethical fidelity to the truth event. For him, fidelity provides the force necessary for unifying the two voids or lacks—one of which is associated with the transcendental subject (for Kant, this is the subject conceived as constituted by the transcendental apperception) while the other is associated with the transcendental object (or object considered solely as a representative of the pure form of objectivity). A similar unifying force is described in the context of Lacan's discussions of the ethics of psychoanalysis, which stipulates that we as 'analysands' should not give up on our desire).

The Nature of Whitehead's Critique of Kant

For his part, Whitehead escapes Circle of Objectivity by expanding it to encompass all entities (both conscious or unconscious, and organic or inorganic) and associated processes of prehension (a correlated generalisation of cognition as comprehension). As he puts it,

> The philosophy of organism is the inversion of Kant's philosophy. *The Critique of Pure Reason* describes the process by which subjective data pass into the appearance of an objective world. The philosophy of organism seeks to describe how objective data pass into subjective satisfaction, and how order in the objective data provides intensity in the subjective satisfaction. For Kant, the world emerges from the subject; for the philosophy of organism, the subject emerges from the world. (Whitehead, 1928: 135)

Furthermore, in his approach to metaphysics he explicitly refuses to think along the lines of the all-too-familiar philosophical pairings between 'substances and qualities', 'subjects and their attributes' or 'universals and particulars'. In contrast, these pairings are displaced by an analysis of interactions between 'eternal objects (as immanent causes) and actual occasions' (as the only ontological pertinent *relata*), with objects conceived as derivative 'nexi' (insofar as they are determined by a common characteristic) or 'societies' (insofar as they are self-sustaining). Whitehead also rejects the Kantian notion of the "thing-in-itself" as something distinguished from 'appearance',

> Kant only saved it [Newton's doctrine of space and time as actual things] by reducing it to a construct by means of which 'pure intuition' introduces an order for chaotic data; and for the schools of transcendentalists derived from Kant this construct has remained in the inferior position of a derivative from the proper ultimate substantial reality. For them it is an element in 'appearance'; and appearance is to be distinguished from reality. (*PR*: 111)

As such, Whitehead's method involves an inversion of relations as conceived by the Circle of Objectivity. This process of inversion transforms prehending actual occasions themselves into monadic but non-eternal 'subjects'. Whitehead elaborates on the various processes of prehension and concrescence by deploying his quasi-platonic 'eternal objects' within an extensive new categorical logic, a logic which Gilles Deleuze considers to be a precursor to the 'Transcendental Empiricism' that he himself espouses[8].

What does Process Philosophy offer to Social Theory?

Like Keynes and L. T. Hobhouse, Whitehead was a 'New Liberal' who openly rejected the Social Darwinism of Herbert Spencer in favour of a balanced interpretation of evolutionary theory. The New Liberal ethos was broad enough to encompass policy positions that today would defended by development economists such as Robert Wade and Alice Amsden, and the radical geographer, David Harvey.

[8] See Juniper (2009) for an extended explication of Whitehead's categorical logic.

Whitehead and his colleagues acknowledged the ‘complexity of organism’ over against the ‘gospel of unity’ and privileged ‘cooperation’ and altruism over ‘competitive struggle’ (Morris, 1990). And where Classical Liberalism sought to find a compromise between the forces of competitive strife and harmony (a conception dismissed by Whitehead as a ‘minor form of beauty’), his own version of New Liberalism sought to establish an interfusion of strife and harmony and an interweaving of contrasts, so that the resulting ‘intensification of individuality’ would contribute to, rather than detract from, the common good (thus, occasioning what Whitehead described as a ‘major form of beauty’).

It is important to highlight the fact that these political conceptions are firmly rooted in Whitehead’s metaphysics. For although ‘process’ requires a balance between flux and permanence; ‘progress’ itself requires a balance between order and novelty for the following reasons: where the former allows fruits of novelty to be plucked, the latter prevents decay through the promotion of ‘new ideals’; and, while the former promotes unity, the latter clearly thrives on difference. Unless we sought to preserve this tension and duality, Whitehead cautioned, either staleness or anarchy, respectively, would result.

Whitehead reasoned that seemingly opposed political positions always shared certain things in common. More broadly,

> The intermingling of Beauty and Evil arises from the conjoint operations of three metaphysical principles: (1) That all actualization is finite; (2) That finitude involves the exclusion of alternative possibility; (3) That mental functioning introduces into realization subjective forms conformal to relevant alternatives excluded from the completeness of physical realization. (Whitehead, 1942: 298)

Whitehead's political views were also congruent with his epistemological position, which emphasized the perilous and imperfect nature of human knowledge: a conception that, in his eyes, supported a duty of tolerance and social experimentation (Petersen, 1999). These views about knowledge carried over to Whitehead's philosophy of teaching, which advocated an egalitarian principle: for Whitehead, the best constraints over students were those that were self-imposed, for freedom and discipline could never be antagonists.

As Williams (2008) argues, this philosophy of openness and tolerance resonates with Bob Connolly's notion of 'bicameralism', which can be defined as the adoption of a paradoxical stance of simultaneously holding opposing views to actively embrace ambiguity and risk-taking as a positive good. Williams acknowledges the generative role of paradox in Deleuze and Whitehead's interpretation of the Kantian disjunctive

syllogism, which privileges a pluralistic ethos over any messianic conception of a final victory either for absolute good or for absolute evil.

A Case Study in the Political Economy of Financial Crisis

One topical example of how these seemingly arcane debates on realism might play out in practice, is afforded by Elie Ayache's critique of quantitative finance theory. Ayache draws upon Meillassoux's notion of absolute contingency to question the notion of an underlying process, which might serve to ground derivative prices. In particular, he interprets "Black Swans"—the rare events that have enormous consequences in the market—as presaging an unforseeable, and unrobabilizable change of context, which completely undermines the domain-specificity of our thinking, thus embodying 'unknown unkowns', lying outside our presupposed 'tunnel of probabilities'. Accordingly, he advocates the use of continual calibration and re-calibration of yet-to-be-traded derivatives on a wide range of prices for traded options including barrier options, variance swaps, options on variance, cliquets, and options on the 'volatility of volatility'.

In contrast, Whitehead opts for a 'nested ontology' in arguing that entities are more stable at a generic rather than at specific levels of determination. This principle has a crucial temporal dimension: on one hand, the shorter the distance into the future events had to be forecast, the greater would be the number of factors that could be treated as given, and the greater the amount of information that would be available for forecasting purposes; on the other hand, the further into the future events had to be predicted, the larger would

be the reduction in what could be treated as given, and the smaller the amount of knowledge that would be available for purposes of prediction. At the same time, interactions between these, now variable factors, would be characterized as more complex and non-linear in nature. Arguably, a similar conception grounded Keynes's (1936) distinction between short-run expectations (relating to emuneration from the exchange of goods and labour services); and long-run expectations (relating to the return on long-lived financial assets and capital).In Ayache's speculative realist world of singular events there would be no basis for making any such distinction. Keynes also goes further than Ayache by bringing the actual return on non-financial assets into the analysis. This is not done, however, to provide an anchor for asset pricing because the return on these non-financial assets is seen to fluctuate with variations in the point of effective demand (which itself could vary due to the effects of turbulence in financial markets).

Conclusions

This paper began with an overview of Meillassoux's brand of Speculative Realism, then went on to compare it with other 'Realisms'—Critical and Structural—before considering Whitehead's Process Philosophy. Each was described in terms of how they deal with Structural Relations, Objects and *Relata,* on one hand, and the 'Circle of Objectivity or Correlation' on the other.

As I see it, would-be Realists must choose between (a) a return to an ungrounded Humean skepticism (Meillassoux); a return to some kind of Objective Idealism informed by modern cognitive science and evolutionary biology (Iain Hamilton Grant and Ray Brassier) (b) a reductionistic conception of philosophy as the hand-maiden of science, but with some interesting things to say about layered ontologies and the logic of scientific discovery (Critical Realism), or about dialectically articulated (structural and genetic) ontologies (Structural Realism and in the prescient work of Albert Lautman, 2011); (c) an approach grounded in Process Philosophy's subversion of Kant, which still preserves his mereological distinction between analytic and synthetic unity based, respectively, on the notion of external and internal relations (Deleuze[9] and Whitehead). Another radical alternative, which cannot be examined here, include Alain Badiou's ethical critique, which is predicated on a Lacanian 'ontology of lack or substraction'.

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[9] Deleuze's (1994: 86) own response to 'Circle of Correlation' is to enrich the Kantian schemata through the deployment of a Bergsonian conception of temporality: "Temporally speaking—in other words, from the point of view of the theory of time—nothing is more instructive than the difference between the Kantian and the Cartesian Cogito. It is as though Descarte's Cogito operated with two logical values: determination and undetermined existence. The determination (I think) implies an undetermined existence (I am, because "in order to think one must exist")—and determines it precisely as the existence of a thinking subject: I think therefore I am, I am a thing which thinks. The entire Kantian critique amounts to objecting to Descartes on the grounds that it is impossible for determination to bear directly upon the undetermined." Significantly, Deleuze is well aware of the fact that Lautman's crucial distinction between genesis and structure first appears in the work of Baruch Spinoza.

Meanwhile, mathematicians, algebraic topologists, physicists and computer scientists are turning to Category Theory to formally express the structural articulation between objects and *relata* (including mereological relationships between opens as parts, and pointless topologies as wholes that achieve formal expression through the very Heyting Connection Algebras pioneered by Whitehead himself and subsequently clarified by members of the Polish School of Logic and Clarke (1981)[10]. The full force of these mathematical formalizations has yet to be unleashed upon the social sciences, to illuminate structural transformations that have until now eluded the grasp of the differential calculus and associated statistical techniques of simulation, estimation and forecasting.

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[10] Baez and Stay (2008) chart the resonances or isomorphisms between physics, category theory, logic, and computation. Notable instances of these developments can be found in the work of Gabriel Catren (2008), Döring and Isham (2008), Landry (2011) and the Siberian-topos group, and the groupoid-based higher dimensional algebras developed by John Baez (2007), among others. In this regard, Catren's recent critique of Meillassoux in the journal *Collapse*, should serve as a potent warning about the dangers of a retreat to a pre-Kantian form of skepticism.

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