

Transformed formalisms

Nathan Brown, *Rationalist Empiricism: A Theory of Speculative Critique* (Fordham, NY: Fordham University Press, 2021). 272pp., £39.00 pb., 978 0 82329 001 7

Describing the general course of twentieth-century French philosophy, Alain Badiou distinguishes between two major, divergent orientations of thought: a rationalist orientation that promotes a ‘philosophy of the concept’, following from the works of Léon Brunschvicg, and a vitalist-existentialist orientation that promotes a ‘philosophy of life’, following from the works of Henri Bergson. In *The Adventure of French Philosophy* (2012), he summarises the historical context in which these two trajectories of thought are set:

In 1911, Bergson gave two celebrated lectures at Oxford, which appeared in his collection *La pensée et le mouvement*. In 1912, simultaneously, in other words, Brunschvicg published *Les Étapes de la philosophie mathématique*. Coming on the eve of the Great War, these interventions attest to the existence of two completely distinct orientations. In Bergson we find what might be called a philosophy of vital interiority, a thesis on the identity of being and becoming; a philosophy of life and change. This orientation will persist throughout the 20th century, up to and including Deleuze. In Brunschvicg’s work, we find a philosophy of the mathematically based concept: the possibility of a philosophical formalism of thought and of the symbolic, which likewise continues throughout the century, most specifically in Lévi-Strauss, Althusser and Lacan.

Badiou goes on to describe how the rationalist trajectory was characterised by the pursuit of a ‘philosophical formalism’, drawing from the rise of structuralist methods in the social sciences and Lacanian psychoanalysis, as well as from developments in mathematical logic. Adapting the historicist impetus behind the French historical epistemology of science emblematised by the works of Bachelard and Canguilhem to the formalist impetus guiding the structuralist and mathematical-logical horizon, Badiou argues, this formalist orientation would also position itself against empiricist conceptions of science advanced by Anglo-Saxon analytic epistemologies.

The second point that was retained was that science, far from consolidating empiricism, is *anti-empiricist*. That

is the absolute break made by French epistemology from Anglo-Saxon epistemology. We see very clearly with Bachelard, but also with Canguilhem, that not only is science not empiricist, but that it is the principal school of non-empiricism, that it forms the principal critique of empiricism itself. Whether it’s a matter of Galileo, Descartes, etc. or even the Canguilhemian conception of the life sciences, it is axiomatic decisions and conceptual constructions that prescribe empirical experimentation, and not the reverse.

Nathan Brown’s *Rationalist Empiricism* firmly situates itself within the horizon set by ‘the philosophy of the concept’, while also contesting the sharp separation between empiricism and rationalism advanced by Badiou’s genealogical distinction. At the same time, it develops out of the resurgence of a concern with the problematic of realism within Continental philosophy, as expressed most distinctly in the body of works that have come to be associated with the label ‘speculative realism’, and with the works and ideas of Quentin Meillassoux, who was himself a student of Badiou. The book rekindles the tradition of French epistemology of science through its elaboration by Althusser and his successors – from Badiou to Meillassoux – to show the inextricability of rationalism and empiricism for a dialectical materialist philosophy.

The result is the distillation of a unique method of speculative critique that hinges on understanding the dialectical intrication between reason and experience, once these are reinterpreted, following Bachelard and Althusser, in their productive, historical dimension: for just as reason realises itself in time in theoretical practices of formalisation and conceptualisation, so experience realises itself in experimental practices bound to historical conditions of technical production. In its historicist aspect, rationalist empiricism is said to be critical rather than dogmatic, insofar as it avoids appealing to an ontological foundation, accepting the Kantian injunction against classical metaphysics. But it is speculative rather than transcendental, insofar as it eschews the Kantian

epistemological foundationalist account of the apprehensive subject as providing the 'ground' of metaphysical enquiry.

In fleshing out the methodological basis and consequences of speculative critique, Brown's argument systematically integrates a variety of theoretical registers: Bachelard's account of 'epistemological breaks' within a historicised epistemology of scientific cognition; Althusser's attempt to secure the distinction between science and ideology through an account of formal theorisation; Hegel's traversal of Kantian transcendental critique in the name of an immanent critique; Badiou's ontologisation of set-theoretical mathematics via Cantor's detotalisation of the infinite; Meillassoux's absolutisation of contingency as providing a speculative materialist answer to Hume's problem of induction; the relation between the process of separation and the commodity form in Marx, etc. The result is a work of philosophy of astonishing breadth, rekindling the systematic ambition of philosophy to think the integrity of scientific ('the True'), political ('the Good') and artistic ('the Beautiful') 'conditions' of philosophy, to use a term again borrowed from Alain Badiou. Above all, Brown's project can be understood as generalising the lessons of the historicised epistemology of science and appropriation of structuralist methods in philosophy elaborated by the Althusserian school and its descendants, the better to think its implications for philosophy and its scientific, artistic and political conditions.

In the Introduction to the book, Brown unpacks the central dyad that organises the title: rationalism aims to think what has to be thought, while empiricism aims to think what is the case. At the same time, these tasks are mutually delimiting and thus inextricable, insofar as what is the case constrains what has to be thought as it must traverse the latter. Understanding this link is coeval with a historicising jettisoning of any foundationalism that would postulate thinking as the transcendental ground establishing the *a priori* conditions for what has to be thought, or else postulate sensory-phenomenological givenness as the ground of what is the case. The passage from transcendental to speculative critique demands a 'transmutation of our epistemological values', leading to a conception of reason unbound from any transcendental foundation, as well as a conception of experience unbound from all appeals to 'givenness.'

To realise this historical 'ungrounding', Brown follows Bachelard and Althusser in reconceiving the dialectical structure of scientific cognition in its relation to ideology. Understood as a diachronic movement of revision and formalisation, science appears not as an ahistorical 'mirror of nature', but rather as 'a field of recursive, historical self-interrogation.' Within such a processual, recursive conception, reason is not the *a priori* bedrock of 'transcendental ideas', but the self-revising protocol of conceptual generation and formalisation in the construction of theoretical frameworks, syntactical systems and deductive axioms-laws; experience is not the fulcrum of our sensory intuition or phenomenological receptivity, but the historically situated space of techno-scientific production and experimentation through which theories are measured against the real. Scientific cognition thus unfolds in the historical-dialectical interplay of these two dimensions, where reason subtracts itself from what is the case through the construction of new formal systems and theoretical-conceptual frameworks, while experience in turn constrains what must be thought through the invention of new experimental techniques for constructing and testing models, specifying the conditions of application and success of a theoretical framework. As Brown puts it:

The integration of this knowledge into scientific theory will then depend upon the capacity to coordinate rational and empirical values: the testing of speculative theory against experimental outcomes, the consideration of experimental outcomes within the framework of existing formalisms, or the transformation of those formalisms to accommodate empirical findings.

Following Bachelard again, Brown indicates how such a conception of science is continuous with a relational ontology and realist epistemology, affirming that the entities tracked by science cannot be conceived in terms of self-identical substances, but describe a probabilistic and uncertain order 'that reaches a certain threshold of stability, but that also never freezes into unchanging self-identity.' Analogously, a concept cannot be conceived in bottom-up terms, as derived from atomistic 'simples' (Descartes), but must be understood as always involving a relational nexus forming 'a complex of concepts and experiences.' This last point merits some reflection, since it touches on a delicate problem inherent to the tradition of French epistemology

of science. One of the central contentions advanced by Badiou in *The Concept of Model* in 1968 is that a 'materialist epistemology' that takes mathematical formalisation to be the mark of scientificity does not merely separate the realm of formal theories from the domain of experience and concepts. Rather, the relation between form and content becomes itself enfolded into the dimension of formalisation, in terms of the relation between syntactical theoretical systems, semantically linked to model-structures that specify a domain of interpretation for a theory. Within Brown's reconstruction, it might appear thus that the separation between the theoretical and the experiential aspects of theory underemphasises how both fit within the horizon of mathematical formalisation as inherent to scientific practice.



In any case, Brown proceeds to argue that the inextricability of reason and experience is not merely legible within scientific cognition but can and must be generalisable within a systematic program for philosophy. The first part of the book expands on the historical lin-

age of the relation between reason and experience in philosophy since the beginning of the modern period; Chapter One explores how, already, early modern rationalism and empiricism constituted themselves in relation to each other by admitting of 'exemplary exceptions' to their respective methodological constraints. In particular, Brown focuses on the Cartesian 'wax thought-experiment' and Hume's extrapolation of the 'missing shade of blue', to show how just as reason must rely on perceptual experience to ground the order of pure thought, so experience must go beyond the domain of what sensible intuition discloses to explain the articulation of impressions and ideas. Indeed, just as Descartes must exceptionally appeal to the flux of sensory determinations and the perception of qualitative changes when providing a retroactive temporal genesis of the *cogito*, so Hume must grant the mind the capacity to form an idea of a missing shade of colour, thereby contravening the empiricist strictures according to which all ideas must follow from corresponding impressions. But rather than proving their internal and mutual incoherence, Brown argues, these examples testify to the inextricability of reason and experience incumbent upon rationalist and empiricist epistemologies.

Unthinkable within phenomenology, and prior to the program of transcendental idealism, Absent Blue Wax delivers the outside of rationalism to the outside of empiricism and lets them mingle in their mutual exteriority ... It is the interruption of experience by reason, and the extrapolation of reason from and yet beyond experience, that is at issue in the rationalist methodological pole, while it is the experience of reason and also the exposure, by empirical science, of what cannot be experienced that is at issue in our empiricism.

Brown goes on to illustrate how the coordinated movement of interruption and extrapolation that articulates a rationalist empiricism becomes explicitly reinscribed in a materialist register in Meillassoux's analysis of the 'arche-fossil' and the problem of ancestral statements incumbent upon such analysis, which leads to the 'paradox of manifestation': while science is bound to experience, it discloses through empirical enquiry a world withdrawn from all correlation to the subject manifestation. Attending to this paradox requires extending the pursuit of a historical and dialectical conception of scientific knowledge against all forms of epistemological

and ontological anti-realisms, against both ‘correlationism’ and ‘subjectalism’. The dialectical resolution of the paradox at the heart of the modern philosophical moment, Brown argues, is the major achievement of Meillassoux’s project: the compatibilisation of the Cartesian affirmation of the reality of primary properties with the implications drawn from the Humean problem of induction. Following Badiou’s attempt to draw the consequences of the Cantorian ‘de-totalization of the infinite’, Brown affirms Meillassoux’s claim that mathematics grants access to the absolute and the disqualification of probabilistic reasoning when arguing for the contingency of the laws of nature. Such a programme satisfies, he shows, the double criteria specified by Althusser as necessary for any (dialectical) materialist practice: (i) the distinction but also possible adequacy between the real and knowledge, and (ii) the primacy of the real over knowledge. At the same time, the suspension of the Principle of Sufficient Reason (PSR) incumbent in the absolutisation of contingency displaces any metaphysical ground or entity in favour of a *principle* of unreason, yielding a materialism than is not dogmatic but properly speculative in scope.

The second part of the book develops the dialectical kernel of the project, providing a novel reading of Hegelian speculative idealism, assessing its limitations and appropriating its central lessons, constructing an approximation to Hegel’s *Logic* for the purposes of developing a de-substantialised and non-transcendental account of speculative thought. Brown distils what he names ‘Hegel’s *cogito*’ at the outset of the *Logic*, where the indeterminate immediacy of pure being in its indiscernibility from nothingness implies the determining mediation of thought: “‘*thought is, thought exists*”, being is determined as thinking being – and thought is the mediation that, by determining being, makes it negative and thus turns it into the movement of contradiction: becoming.’ It is thus the very (discursive) articulation of pure being as indeterminate immediacy, and its paradoxical (in)determination as indiscernible and so logically identical with nothingness, that implies the existence of thought at the beginning of the *Logic*.

Now, this particular argumentative manoeuvre merits some cautionary reflection: that is, the claim that we find Hegel’s ‘*cogito*’ as implied already in the germinal dialectic between being and nothingness, and the

concomitant derivation of becoming that follows. For Brown’s gesture requires that we retroactively notice the determinacy and mediation of thought as implicit in the indeterminate immediacy of being. But Hegel explicitly outlaws any appeals to intentions or subjective acts to ground the absolute difference between being and nothingness; while the agency of thought must in the last instance be derivable from the movement of the *Logic*. Brown’s argument, however, suggests that the determinacy of thought involved here is not that of the ‘thinking-self’: the Hegelian *cogito* can neither be identified with the Cartesian *cogito* of apodictic knowledge, nor with the Kantian ‘I’ or transcendental subject of apperception. Brown argues, ‘by detaching the categories from “their abstract relation to the ‘I”” in order to address “what they are in themselves”, Hegel’s *Logic* eliminates the transcendental standpoint necessary to constitute a priori conditions of possibility.’ What is at stake then is the consolidation of a desubstantialised agent of thought in immanent critique, for which thought is its own subject. Put differently, thought does not belong to a subject, nor conforms to the *a priori* conditions of a subject that engages in conceptual activity as a result: thinking is the immanent experience of thought as overcoming the separation between the *a posteriori* and the *a priori*, and which understands contingency as the progressive derivation of thought’s necessary determinations. In this regard, Brown’s reading follows contemporary readings of Hegel as a sublating of the dialectic between freedom and determinism, conceiving of necessity itself as the becoming and retroactive determination of contingency:

There is no thinking of that which is prior to the immanent experience of thought, its movement. And thought is unthinkable as posterior to the movement of such experience. Thought is; thought exists: this fact displaces the opposition between the *a priori* and the *a posteriori* because it involves the rational experience of thought, as it takes place.

Brown rearticulates the relation between contingency and necessity, resisting the ‘double annulment of time’ described at the end of the *Phenomenology* (as Absolute Knowing) and the *Logic* (as Absolute Idea), supplanting the necessity of contingency for the movement of contingency as the becoming of necessity. For Hegel surreptitiously brings the movement of conceptual negativity to rest by grounding the groundless fulcrum of

contingency and time under the Idea of the 'Whole', in order '[t]o seal the Absolute as the negation of the very movement of negation... merely declare, by fiat, that the restlessness of the negative which is the becoming of the concept can grasp itself without the very means of its self-comprehension.' In turn, Brown argues, speculative materialism reaffirms the restlessness of the negative, the dissolution of the 'I' and the groundlessness of temporal being as contingency, in what amounts to a resolute rejection of the Principle of Sufficient Reason, still adhered to by absolute idealism. This finally implies a re-articulation of the ontological difference between being and beings, now understood in terms of the distinction between the necessity of contingency (universal-ontological principle) and the contingency of beings (particular-ontic determination).

The book's third part deploys the methodological framework and the re-inscription of the ontological difference to show how rationalist empiricism conceives of its scientific, artistic and political 'conditions'. Brown illustrates the 'complexity and precision of science's ontic operations' in unison with the 'ontological questioning of philosophy'. He focuses on the problem of measure and measurement, tracing the historical redefinition of the concept of the kilogram since the nineteenth century. This history not only provides anecdotal illustration of the historicity of scientific concepts, but reflects the displacement of intuitive self-evidence inherent to the dialectic of formalisation and experimentation outlined in the introduction. Furthermore, it shows the process by virtue of which science overturns the metaphysical order of self-identical substances, by positivising a probabilistic order of uncertainty and contingency within its ontic operations, again in continuity with the absolutisation of contingency and the concomitant de-absolutisation of natural law incumbent upon speculative materialism.

Brown shows how rationalist materialism becomes continuous with a 'materialism of the idea', as expressed in the digital photographic work of Nicolas Baier. Performing a materialist 'inversion of Platonism' different than the Nietzschean vitalist transvaluation of the dialectic, in Baier's work the formal kernel of the intelligible is not divided from but accessed through the technical externalising process of the sensible itself, i.e. what Brown names, drawing upon Whitehead, a '*technics of prehension*'. He subtracts the operational kernel from White-

head's specific relational process ontology, focusing on how processes of transition and concrescence organise how the ideal becomes exteriorised through the technical mediation of the photographic medium. He exemplifies this dynamic across a series of Baier's work, in continuity with the generalisation of the scientific dialectic between formalisation and experimentation, and drawing from a variety of additional registers: Plato's dialectic between the sensible and the intelligible, Lacan's relation of the image and the real in the gaze, Stiegler's account of the coevolution of technics and the human in the exteriorisation of ('tertiary') memory, and so on.

Brown then goes on a historical detour that refers us to the central role of the concept of structure implicit in Plato's cosmological genealogy in the *Timaeus*. Above all, the concept of structure appears as the 'Rosetta stone' binding the discourses of ontology, epistemology and methodology. Brown attends to the ambiguity latent in Plato's account of Ideas (*eidos*): in his earlier works designating at once the immutable character of the intelligible forms, but here describing the genesis of the elements by the demiurge, and thus the materialisation of the Idea. These elements, insofar as they are geometrically composed of triangular forms, are non-sensible assemblages or assembled forms, subject to generation and destruction; diataxis becomes the fulcrum mediating metaphysics and physics, the purity of the idea and the becoming of bodies, the rational and the empirical.

The last three chapters jointly explore the political consequences of rationalist empiricism, and in particular how it leads to a reappraisal of certain core tenets in dialectical materialism. Brown explores in more detail how Hume's problem of induction and Meillassoux's positive appropriation of it through absolutisation of contingency becomes articulated in the practical-political sphere in relation to Badiou's account of post-evental Truth: how does the contingency of the eventual emergence of the subject of truth accommodate the horizon of emancipatory politics? Using the example of the sequence and implications of the collective action organised around the Occupy Oakland movement, he insists on the disruptive, subjective force of the event as shattering the empirical order of 'what happens', while also upholding an empiricism of the encounter and an 'aleatory rationalism' in which contingency is forged by a 'groundless synthesis of encounter and decision'. In sight of the undecidable ten-

sion between the thesis that such a sequence implied real change and the possibility that nothing finally happened, it would be interesting to see how Brown's argument might appear in light of Badiou's more nuanced theory of change in his re-elaboration of the theory of the event in *Logics of Worlds*.

Brown critically and constructively addresses the efforts of the collective *Theorie Communiste* to rework Althusser's account of structural causality. Secularising Spinoza's account of the relation between substance and the modes, capital unfolds as an immanent process of detotalisation or as an internal scission of the capitalist world. In doing so, it undermines the specific conditions of production and agency in the historical sphere; capital is but is a perpetually dividing structure that reconfigures its parts and relations, understood in analogy with how Spinoza's substance is formally distinguished by an infinity of attributes and modes without itself becoming ontologically divided. Brown follows the TC's communisation theory, which attempts to overcome the programmatic history of the left: just like rationalist empiricism involves the dialectical interplay between theoretical formalisation and technical experimentation, so communisation concerns the dialectical interplay of class struggle, through which the proletariat becomes at once a disruptive force in relation to the structure of capitalist reproduction, and at the same time identifies itself within such structure as a class.

The final chapter provides an analysis of Marx's account of the 'process of separation' (*Scheidungprozess*) within the theorisation of labour, where 'the concept of separation is the key to understanding the genesis of capital, its subsumption of social relations, and the tendential decline of its historical mechanism.' Emphasising the undertheorised distinction between separation and alienation, Brown argues that the former concept does not rely on the logic of exteriorisation implied by the latter, but describes a formal process central to Marx's method of analysis, which secures the passage between the theoretical and historical parts of *Capital*. In the last instance, this approximation enables Brown to find within Marx's account of separation an expression of rationalist empiricism that 'must grasp history theoretically, and theory historically', and which is deserving of the name of 'science'.

Rationalist Empiricism is a work of exceptional

breadth and scope, articulating the concerns and ambitions proper to the post-war French Althusserian school and its descendants, as well as contemporary philosophical questions concerning the possibilities for dialectical materialism today. More than this, it opens a space for an unprecedented dialogue concerning the pertinence of structuralist methodologies in contemporary materialisms. Indeed, while the lineage of Brown's book discusses the appropriation of structuralism in the social sciences and psychoanalysis within the French post-war tradition, contemporary Anglo-Saxon philosophy of science and mind has likewise rekindled the prospects for epistemological and metaphysical realism through the development of structural methods, for example, in James Ladyman's brand of ontic structural realism, by way of an information-theoretic understanding of structure derived from Daniel Dennett's account of 'real patterns'. An encounter between these two traditions would allow us to interrogate, above all, the role of mathematical-formal languages in ontological-epistemological theorisation and, in particular, in defining a concept of structure suitable to explain the relation between articulation between scientific theorisation and the world across its discursive, sensory and technical dimensions.

Another possibility opened by *Rationalist Empiricism* concerns the consequences that follow from the critique of 'givenness' characteristic of not only modern concept-empiricism, but also of those philosophies that reify sensory-phenomenological experience as a fulcrum of pre-theoretical understanding. The pursuit of a historical conception of scientific practice that overcomes the conflation between causal and epistemic factors while accounting for the relation between theoretical and experimental practices as they unfold historically forms a common thread binding post-Sellarsian naturalisms in the analytic tradition to the ambitions of the French historical epistemology of science that Brown follows. Rather than simply disavowing givenness at the expense of eliding the role that experience plays in mediating our knowledge of the world and ourselves within it, both traditions suggest that we can and ought to theoretically formalise the dimension of givenness itself. That is, we must fold the receptive dimension of experience into the dimension of structure itself, to show how our theoretical and experimental practices remain grounded in ostensive operations of indexing, measurement and

stabilisation, through which cognitive systems represent and intervene in nature and themselves within it.

A coordinated assessment of the legacy of the French school of historical epistemology of science and its incarnation within current philosophical materialisms in relation to contemporary Anglo-Saxon structural realisms in the philosophy of science and mind would thus begin by interrogating how the operation of mathematical formalisation leads to divergent concepts of 'structure',

through which ontological and epistemological theorisation construes the relation between subject and world. Seen in this broader context of philosophical questions and tasks, *Rationalist Empiricism* comprises an essential contribution to a living philosophical tradition, but is also an intervention that opens a path for unprecedented encounters between schools of thought that have for too long been kept isolated from each other as a result of obsolete disciplinary boundaries.

Daniel Sacilotto

Art's social forms

Louis Menand, *The Free World: Art and Thought in the Cold War* (Farrar, Straus and Giroux: New York, 2021). 857pp., £30.00 hb., 978 0 37415 845 3

During the past decade there has been an intensified debate in mainstream art criticism about the tension between art's freedom and free speech. In this debate art's freedom has been accused of being under severe threat by, on the one hand, cultural Marxists concerned with identity politics and social justice, and, on the other, by alt-right fascists' promoting a nationalistic art and culture. Both, it has been argued, threaten art's freedom. But what is meant by this concept here? Although art's freedom together with free speech is a given in liberal western democracies, how can this concept be understood? More specifically, is the freedom of art as pure and cleansed of all connections to a societal ground as its liberal defenders try to argue?

From the standpoint of western philosophy, art's freedom – or rather its autonomy – can be traced back, for example, to Friedrich Schiller's *Kallias Letters* (1793), written to his friend Gottfried Körner a few years after the French revolution. Here Schiller constructs an analogy between beauty – represented in art – and the autonomy of the free will as formulated in Immanuel Kant's moral writings, making beauty into 'freedom in appearance'. This idea that art gains autonomy through its form, which then becomes an image of freedom, continues throughout modernity in writers, thinkers and intellectual movements as different as *l'art pour l'art* and the Frankfurt School, Oscar Wilde and Theodor Adorno, including influential American art critics in the Cold War period like

Clement Greenberg and Harold Rosenberg.

Another way of interrogating the idea of art's freedom is to focus on the country that has been more than any other historically connected to the idea of freedom, and on a period in its history when this was particularly the case: the USA in the time of the 'free world'. The latter is a term mainly associated with 'The Truman Doctrine', derived from a speech by the then president, Harry Truman, in the spring of 1947, which is often regarded as announced the beginning of the Cold War. The speech is partly reprinted in Louis Menand's latest book, *The Free World: Art and Thought in the Cold War*. Truman famously characterises liberal democracy as a way of life distinguished by 'free institutions, representative government, free elections, guarantees of individual liberty, freedom of speech and religion, and freedom from political repression', in contrast to the way of life of the totalitarian state that 'relies upon terror and oppression, a controlled press and radio, fixed elections, and the suppression of personal freedoms'. The task that Menand sets himself is to investigate the art, culture and thought that was produced in this geopolitically tense historical moment. It's a huge object of study so it is no surprise that the book spans 800 pages. But it has a sharply defined timeframe and geographical location: from the introduction of Truman's doctrine to the end of the Soviet Union in 1991, all viewed from the standpoint of the USA. Despite this scale, most examples in the book cover the 1950s to