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# Inquiry An Interdisciplinary Journal of Philosophy

Publication details, including instructions for authors and subscription information: <u>http://www.informaworld.com/smpp/title~content=t713393858</u>

## Review of **Being and Event** Paul Livingston <sup>a</sup>

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Online Publication Date: 01 January 2008 To cite this Article: Livingston, Paul (2008) 'Review of **Being and Event** ', Inquiry, 51:2, 217 - 238 To link to this article: DOI: 10.1080/00201740801956945 URL: http://dx.doi.org/10.1080/00201740801956945

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# Review of Being and Event\*

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(Received 21 August 2007)

#### I.

In 1929, Gilbert Ryle published in *Mind* a mildly critical review of the thenrecent masterpiece of the new "phenomenological method," Heidegger's *Being and Time*.<sup>1</sup> Displaying both his characteristic sensitivity to the history of philosophy and an exhaustive understanding of the methods and aims of the new phenomenological school, Ryle praised Heidegger's work for the depth of its insights and its recognition of the fundamental nature of the problem of Being it took up; at the same he expressed some doubts about its way of treating meaning, knowledge, and intentionality. Had those who preceded and succeeded Ryle in developing the methods of what would later come to be called "analytic philosophy" displayed Ryle's depth of understanding of the leading work of their German and French colleagues, the history of twentieth-century philosophy might have come to different, and perhaps happier, ends. In any case, especially for those who believe that the future of philosophy may depend in large part on overcoming the most damaging legacy of this history, the still pervasive and philosophically disastrous split between analytic and continental philosophy, the recent English translation of Badiou's masterpiece, Being and Event, will be especially welcome.

In the new preface written in 2005, Badiou expresses the hope that the new translation of his book might "mark an obvious fact: the nullity of the opposition between analytic thought and continental thought" (p. xiv).

0020-174X Print/1502-3923 Online/08/020217-22 © 2008 Taylor & Francis DOI: 10.1080/00201740801956945

<sup>\*</sup>Review of Alan Badiou, *Being and Event*, Trans. Oliver Feltham, (London: Continuum, 2005), 559 pp., ISBN 0-8264-5831-9, hb. \$34.95. Page references in the following text are to this work.

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Even if we cannot (yet) follow Badiou in declaring the obviousness of this nullity, there is good reason to hope that his radically innovative combination of methods will provide both an inspiring model and a source of rich philosophical and metaphilosophical conversations between the two traditions for years to come. The book, which borrows two-thirds of the title of Heidegger's work and exhibits a similar scope and level of programmatic ambition, most centrally takes up the problem of the relationship between the field of ontology – the description or knowledge of whatever is – and what Badiou terms the "event," that which (as he argues) escapes any possible ontological reckoning, but is nevertheless at the core of history and the basis of any possible intervention in it.

The centrality of the problematic of the event within it marks Badiou's project as one in the line of inheritance of Heidegger's own reflection on being. But whereas Heidegger, beginning in the 1930s, thought of the *Ereignis* as the futural event "of" being, the moment of its coming back to itself after the long history of forgetting and obscurity that he called "metaphysics," Badiou opposes the two, treating events as essentially subtracted from, or indiscernible from the perspective of, being itself. Deleuze and especially Lacan also figure prominently as recent, though problematic, antecedents to Badiou's treatment. But although *Being and Event* thus locates itself squarely within the recent tradition of continental philosophy that takes seriously the questions, and limits, of a "fundamental ontology," its most significant and radical innovation is nevertheless its use of the methods usually located, in the recent history of philosophy, at the polar opposite of Heidegger's project, namely those of the mathematical set theory developed by Cantor, Frege, Russell, Gödel, and Cohen.

In its rigorous development of the axioms and results of set theory themselves, Badiou's work is a model of clarity, akin to a good expository textbook. The standard axioms (in the canonical formulation given to them by Zermelo and Fraenkel, also known as ZFC) are clearly introduced and explained. Those with interests in the "philosophy of mathematics" as it has usually been defined will find his unorthodox but clear discussions of the consequences of adopting or refusing the various possible axioms particularly intriguing.<sup>2</sup> Badiou clearly and rigorously explains, as well, the theory of infinite sets first posited by Cantor and the development, after him, of the implications and problems of the existence of the infinitely diverse and varied "transfinite cardinals." In connection with one of these problems, that of the truth of the "continuum hypothesis" over which Cantor struggled in vain during the last years of his life, Badiou follows one of the most philosophically interesting developments of set theory over the course of the twentieth century, the complex metamathematical inquiry into the status of this hypothesis under various foundational assumptions. The inquiry culminated in 1963 in P. J. Cohen's advanced technique of "forcing." Since the details of forcing are beyond the scope of even a good

graduate-level course in set theory, Badiou's discussion of the technique, though again clear, demands of the reader an especially high level of formal competence.

From these results of set theory he draws a host of provocative conclusions about being, knowledge, language, and truth, the paradoxical "event" that interrupts them, and the structure of a reconceived subjectivity whose essence is "fidelity" to its consequences. In deriving this wide-ranging philosophical discourse, Badiou treats the axioms and theorems of set theory (on one of its various possible formulations) as if they were something like a revelatory text in which one can directly read the contours of being itself, as well as their inherent limitations. One of the most fundamental (though unargued) claims of the book is, indeed, Badiou's identification of mathematics (or standard set theory) with ontology *simpliciter*. This identification, like other decisive claims throughout the text, is not the result of any deductive or inductive argument, but rather of a basic and free *decision*, which Badiou likens to the mathematician's decision to adopt or refuse a particular axiom in the course of speculative mathematical thinking.

Badiou's applications, or extensions, of set-theoretical concepts to the most diverse and fundamental domains of thought and *praxis* are, uniformly, extremely creative and imaginative. They mark the quite possibly unique genius of a mind that is equally at home with the rarified abstract hierarchies of set theory's multiple infinities and the (equally rarified, though usually much more vaguely expressed) problems of truth, meaning, and subjectivity that have articulated the corpus of interesting philosophy (analytic and continental) over the past hundred years. Yet as much as it may give grounds for hope, there is also reason to doubt that *Being and Event* will succeed in providing a project that can be continued, even with significant critical adjustments and limitations, by members of the (at present extremely disjoint) audiences it addresses.

For those students of continental philosophy who, drawn by its rhetoric of activism and militancy, see in *Being and Event* a manifesto for activism or radical exercises of the political imagination, it is doubtful whether its appeal to set theory can be, at present, much more than an empty gesture toward a largely uncomprehended source of doctrinal authority. There is an eminent danger, in particular, that these students, lacking a detailed understanding of Badiou's formal apparatus, will take up his terminology as jargon, and thus lose the clarity with which Badiou himself employs it. Coming from the other side, as well, it seems likely that analytic philosophers may find Badiou unrigorous, if not in his development of the details of set theory themselves, then certainly in his application of them to the murky questions of being, event, and subject; as imaginative and innovative as these connections can be, their *necessity* is not always obvious, and the particular results that Badiou reaches depend in detail on the rich

but dense matrix of concepts he draws from Lacan and other poststructuralist philosophers of a more "literary" bent. In the new preface, Badiou points to ongoing trouble, since the book's original publication in France in 1988, on both fronts:

In the end it turned out that due to my having company with literature, the representatives of analytic philosophy, including those in France, attempted to denigrate my use of mathematical formalism. However, due to that very use, the pure continentals found me opaque and expected a literary translation of the mathemes. (p. xiv)

The problem of reception that Badiou describes cuts deeply, not only in philosophy departments but throughout the fields and disciplines that have some use for the methods of twentieth-century philosophy in any of their forms. If there is any hope for the continuance of these methods, it will indeed be important that continental philosophers learn logic and set theory, and that analytic philosophers learn Lacan, Deleuze, and Derrida; this will require, clearly, that both groups give up deeply-held prejudices and methodological assumptions. It is thus certainly to be hoped that the current translation of *Being and Event* helps to create an audience that can read it; nevertheless the development of such an audience may take a long time, and it will take more than one book, no matter how imaginative, to anchor it.

From the beginning, it is easy to feel that *Being and Event* announces itself as the event it would like to be, and its prospects for success, true to its own doctrine, are marked in the future anterior as the components of theory and elements of action that *will have been* possible if the text finds a lasting reception. One of the principle stakes of its doctrine of the event is the militancy it aims to make possible within a post-Marxist conception of political action. It is an index of Badiou's unique cast of mind that he conceives of the possibility of intervention as dependent upon a *deductive* drawing of consequences from the paradoxical structure of the event; here, the interventionism of Badiou's politics meets the rigor of his set-theoretical analysis. Again true to its doctrine, *Being and Event* as a whole stakes itself on a kind of rigor that, familiar to mathematicians and logicians, marshals the correctness of formal analyses against the accusation of error:

For what I want to emphasize here is that I present nothing in mathematics which has not been established; I took some care to reproduce the demonstrations, in order that it not be thought that I glossed from a distance. In the same manner, my recourse to the poets is based on an interminable frequentation of their writings.

Thus one cannot corner me in some supposed ignorance, neither in the matter of the formal complexities I require, from Cantor to

Groethendick, nor in the matter of innovative writing, from Mallarmé to Beckett. (p. xiv)

With respect to its poetic *as well as* its mathematical registers, Badiou thus claims a rigor of method, and a demonstrative certainty in its results, that is typical of the great philosophical systems of the past. In relation to the history of philosophy that it aims to take up, it is this rigor, indeed, that authorizes Badiou's claim to be doing what "Plato, Descartes, Leibniz or Hegel have done, a hundred times over since the very origins of our discipline..." (p. xiv). It remains an open question whether, beyond the accusation of ignorance that Badiou guards himself against, the genuinely new and unique method of *Being and Event* will succeed in finding a central place within the projects of a rectified philosophy whose own progress in erasing the boundary between analytic and continental could redeem these lofty claims.

#### II.

The set theory that we receive today has its immediate origin in attempts to describe the underlying logical foundations of mathematics and thus put the practice of mathematics on a secure logical basis. The original logicist project of reduction is today widely considered to have failed, owing largely to the incompleteness theorems of Gödel and related paradoxes. But philosophical and metamathematical reflection about the implications of set theory's various axioms, the effects of their adoption or refusal, and the possibilities of our knowledge of its structures nevertheless continues, and has formed an important part of the philosophy of mathematics in recent years. While continuing this reflection, Badiou also aims to wrest it from the philosophy of mathematics strictly defined; indeed, at his hands the entities and constructions of set theory define a fundamental ontology, the doctrine of the existence of anything and everything that exists. This doctrine will thus yield, according to Badiou, a comprehensive understanding of the extent and limits of what can be said to exist, as well as a "subtractive" demonstration of what, without existing, exceeds these limits, the "event" which Badiou considers intractable to ontology itself.<sup>3</sup>

The most basic notion of set theory is that of a set, or of a grouping of objects or entities of any kind.<sup>4</sup> Such a grouping is indifferent to order, but a set may (and indeed almost always does) include other sets. It is this that yields, most directly, the first of Badiou's surprising and imaginative ontological claims. This is the claim that, as he puts it, "the one is not."<sup>5</sup> For Badiou, a set presents as one what is *intrinsically* many or multiple. Thus any presentation of a unified, single entity is actually the outcome of a more primary act of grouping or presenting its elements, what Badiou calls the "count-as-one." If we assume, moreover, that *all* entities presented as ones

are in fact sets formed through such an operation, then we have no alternative but to think of the entities grouped together as themselves groups resulting from another, earlier action of grouping, and so on unto infinity. Badiou terms the entities grouped together, before they are so grouped, "inconsistent"; the first axiomatic claim of his ontology is therefore that being is presented wholly as such inconsistent multiplicities.<sup>6</sup> The claim, in the ontological signification that Badiou gives it, bears against the whole tradition of philosophy that has, since Parmenides, taken being to be linked to *unity* in a privileged way.

If every set is simply the result of counting-as-one a multiplicity of other sets, the regressive decomposition of sets into their elements is halted, if at all, only when an element is reached that itself has no further elements of its own. This, the so-called "null set" or "empty set," is normally symbolized by ' $\emptyset$ '; its existence is asserted by a fundamental axiom of the canonical ZFC formulation of set theory. Since the null set contains nothing, Badiou calls it the "void" or the "name of the void"; its presentation in more complex sets, he takes it, indicates *within* the order of being whatever escapes it.<sup>7</sup> The very existence of the null set testifies to a kind of limit of being in its capacity to present multiplicities, the capacity that Badiou identifies with ontology itself. Within ontology, the void is accordingly the "proper name of being"; it is the "presentation of presentation" at its own inherent limit.<sup>8</sup>

The thought that, through the apparatus of set theory, being can be grasped in terms of presentation (that is, that every being is, as such, a presented being) underlies one of the most convincing and innovative applications of set theory in Badiou's entire book. This is the distinction he formulates between *presentation* and *representation*. The distinction gives Badiou a rich and promising set of terms in which to discuss the difference between nature and history, the break with the natural order that comes with the first representational recounting of its terms, and the originary violence of the state that this recounting first makes possible. A set groups together its several individual elements or terms into a unity by virtue of the fundamental operation of the count-as-one; but these elements may again be regrouped as subsets or "parts" of the initial set. Thus, for instance, the set containing Alain, Bertrand, and Cantor has three elements, but it has eight subsets; the set containing only Alain and Cantor is one of these, as is the set containing only Bertrand, and the empty set is a subset of every set. If we now gather together these eight subsets into a new unity, we obtain what is called the *power set* of the initial one. If the initial set, for instance, is a, then the power set p(a) is the set of all its subsets.

The size of the power set, the number of elements it has, is always greater than the size of the initial set itself. It re-gathers all the possible groupings of elements present in the first set; it may thus be considered to re-count, in a faithful but nevertheless productive way, the elements counted as one in the initial grouping. This re-counting Badiou terms "representation," and identifies the distinction between the initial set and its re-counting in the power set with the distinction between *presentation* and *representation* quite generally. If the initial set is what Badiou calls a "situation," then its power set is termed the "state" of this situation; it contains whatever, presented in the initial situation, can again be regrouped and re-presented as a one in representation.<sup>9</sup>

Having thus defined in set-theoretical terms the distinction between what can be seen as presented as one in any situation and what can, through regrouping and re-counting, be considered as represented or representable in it, Badiou can now provide a general and natural-seeming distinction between "nature," in which terms are uniformly transparent to their representation, and "history," in which this is not so and the inherent excess of representation over presentation provides for the possibility of evental change. Badiou's model for nature, plausibly enough, is the natural numbers 0,1,2,3... He follows the canonical technique for defining these numbers in terms of sets; on this technique, 0 is identified with the empty set, 1 is the set containing only the empty set, 2 is the set containing 0 and 1 (thus defined), and so forth. Using this technique, each natural number can in fact be defined as the set containing all of its predecessors. It follows that the natural numbers, within the hierarchy they themselves define, are what Badiou terms "normal."<sup>10</sup> That is, restricting ourselves to the natural numbers, if any natural number is presented in a situation, it is also represented in the state of that situation. The number 5, for instance, contains as elements the numbers 0,1,2,3, and 4; each one of these (take, for instance, 3) contains only elements (0,1, and 2) that are also independently presented in the original situation; the state of the situation, regrouping these again, will re-present the original element (3) they comprise. In this case, in the gulf between presentation and representation, nothing essentially new emerges; representation simply reorders what was already presented without bringing anything new to light. That all of a situation's terms be normal in this sense is, for Badiou, the mark of its being a "natural" one; in such situations, the very conditions requisite to evental change are absent, since representation can only re-order possibilities that were already fully present at the level of the situation.

Quite different is the case of what Badiou terms "historical" situations. In these situations, an element may contain further elements that are not already presented independently elsewhere in the situation. Badiou calls such an element, which contains others not independently presented, a "singular" term; a singular term, while presented in the initial situation, will not be represented by the situation's state. Or the state may bring forth, through its re-grouping, elements that were nowhere presented in the original situation; Badiou calls these "excrescences."<sup>11</sup> The possibility of excrescences is particularly significant, since it will be through these that the event works its consequences on the situation in which it intervenes.

The political register of the "state" metaphor is deliberate, and provides the basis for one of the most interesting political suggestions of the book. It is that representative politics, even in its most democratic forms, works fundamentally, not by representing the individuals who comprise a state, but at one essential remove from them, by representing them only *qua* the sub-groupings or constituencies in which they may be considered to participate.<sup>12</sup> Thus the state, as necessary as we may see its existence to be, is according to Badiou always essentially excessive with respect to the individuals whose interests it claims to address; its excess is that of representation over presentation, of the names and concepts that define groups and constituencies over the members of those groups themselves. It follows that any real intervention in a constituted political order is as much an intervention on names as it is on their bearers; any possibility of genuine change depends on unfolding the latent possibilities of the names and concepts that are already circulating in order to undermine the logic of the existing situation. Such a self-nominating, in which the nominal intervention on what will have happened itself plays the most decisive role in determining what *has* happened, is what Badiou will term "event"; with its doctrine, he will attempt to show how this paradoxical nominalization can be conceived as breaking not only with the constituted political order but indeed with all ontology, and thus as summoning forth "from the void" of ontological presentation the possibility of genuine novelty.

With the distinction between presentation and representation, we are thus on the brink of Badiou's set-theoretical formalism of the event; there is only one more piece that must be put into place in order to understand its all-butparadoxical formulation. The paradox that the young Bertrand Russell, in 1901, found in Frege's initial formulation of set theory has subsequently played a decisive role in the development of its axioms and reflection on their implications; the question of decision it raises also makes it possible for Badiou to declare the event outside ontology, immune to the effects of its structuring and capable of instituting a fundamental break with its closure. Frege had held, as is initially plausible, what is called an unrestricted comprehension principle: he held that for any property nameable in language, there is a set consisting of all and only the things that have that property. For instance, the predicate "red" should ensure the existence of a set of all and only red things. All else being equal, moreover, according to this principle, sets can be members of themselves; for instance, "having more than five elements" is a perfectly well-defined property, and according to Frege's principle, the set of all things satisfying it ought to exist. Since it has more than five elements, this set clearly contains itself. In this case, selfmembership is no problem; but as Russell showed, its general possibility proves fatal to the comprehension principle that Frege had presupposed.

For if it held, it would be possible to define a set consisting of all and only sets that are *not* members of themselves. Now if we ask whether such a set is a member of itself, it is clear that if it is, it is not, and if it is not, it is; the paradox, as Badiou puts it, "annihilates" the logical consistency of a language that allows it to be formulated.<sup>13</sup>

To resolve the paradox. Russell thought that it would be necessary, on the level of the fundamental axioms of set theory, to prohibit sets from being members of themselves; only in this way would it be possible to ensure the logical integrity of the language that picks them out. In order to do so he suggested a "theory of types" according to which sets can only have, as members, sets of a more basic level than themselves. The universe of sets, on Russell's assumption, is therefore inherently stratified into levels of inclusion; at the bottom of the hierarchy of levels is a basic "founding" level at which no further decomposition of sets into their elements is possible. Set theorists have subsequently captured this picture, in a more general form, with what is called the axiom of foundation: this axiom requires, of every existing set, that its decomposition yield a most "basic" element that cannot be further decomposed into further elements of that set. With the axiom of foundation, set theory (ontology, on Badiou's formulation) prohibits self-membership by requiring that each set be ultimately decomposable into sets more basic than itself. It thus secures language from its paradoxes, allowing the whole range of being it defines to be traced by a language whose logical coherence remains unthreatened by them.

As further set-theoretical reflection has shown, however, the axiom of foundation, though the most direct way to avoid Russell's paradox, is not strictly necessary for the logical coherence of an axiomatization of the nature of sets; various versions of "non-well founded" set theory take up the consequences of its suspension. Most directly, suspending the axiom of foundation means that sets can be, as Badiou suggests they inherently are, infinite multiplicities that never "bottom out" in a simplest or most basic element. And this infinite multiplicity is indeed essential, on Badiou's accounting, to the potentiality of the event to produce novelty. The schema that portrays this infinite potentiality breaks with the axiom of foundation by *explicitly asserting* the self-membership of the event. For Badiou, however, this is not the basis of a rejection of the event's capability to go *beyond* ontology in introducing happening into the intrinsically non-evental order of being.

Though the event will thus introduce fundamentally new consequences into what has formerly been constituted as the situation, every event has its *site* within the existing situation itself; that is, every event happens somewhere, and the consequences of its occurring will depend (although in a way that is essentially unpredictable from the perspective of the situation as a whole) on what is contained in this "somewhere." Thus, if, in a given situation, there exists (i.e., there is presented) an evental site X, Badiou defines its event thus:

$$e_x = \{x \in X, e_x\}$$

The event is the set made up of, on one hand, all of the elements of its site, and second, it itself.

The self-membership of the event marks, for Badiou, a fundamental characteristic of its logic, which gives it with the peculiar status of a recounting of the existing order that nevertheless introduces a fundamental novelty into it. He develops, for instance, the example of the French Revolution. The name "The French Revolution" captures (presents as a one) all that makes up its site, namely a vast variety of the "gestures, things, and words" that occurred in France between 1789 and 1794. But the possibility of determining these varied facts and circumstances as amounting to the revolution itself depends, as well, on the moment at which the revolution names itself, and so can be considered to have taken place:

When, for example, Saint-Just declares in 1794 that 'the Revolution is frozen', he is certainly designating infinite signs of lassitude and general constraint, but he adds to them that one-mark that is the Revolution itself, as this signifier of the event which, being qualifiable (the Revolution is 'frozen'), proves that it is itself a term of the event that it is. Of the French Revolution as event it must be said that it both presents the infinite multiple of the series of facts situated between 1789 and 1794 and, moreover, that it presents itself as an immanent resume and one-mark of its own multiple... The event is thus clearly the multiple which both presents its entire site, and, by means of the pure signifier of itself immanent to its own multiple, manages to present the presentation itself, that is, the one of the infinite multiple that it is. (p. 180)

The essential self-membership of the event thus proves to be the basis of the possibility of its appearance in the historical situation its occurrence will have transformed. Thus the event assures its own having-taken-place, first by constituting the place (the evental site), and then verifying itself by naming itself as one of its own elements.

But will the event *already* have been presented in the situation in which it is, if it *will* have occurred, later recognizable as always having played a role? This question, according to Badiou, is a most decisive one; on it (due to the event's almost paradoxical logic of self-inclusion) turns the happening of the event itself.<sup>14</sup> But because the event's self-inclusion also makes it bottomlessly infinite, nothing on the level of the situation itself can decide

it. For an element of the situation to amount to a presentation of the event itself, it would have to be clear that this element also included itself, but this cannot be verified (although neither can it be excluded) on the level of what the situation presents. Accordingly, Badiou holds, "only an interpretative intervention can declare that an event is presented in a situation" (p. 181); the free intervention will decide what is, for the situation, undecidable, passing judgment on the taking-place of the event whose consequences it itself calls into existence.

Having thus described the essential structure of the event, the burden of the remainder of the text is to demonstrate its possibility and the conditions of its taking place. Among these conditions is, first of all, the *intervention*, an essentially unpredictable act by which an anonymous or indifferent "name" is taken from within an evental site and declared the name of the event itself, thus introducing the event into the state's re-counting of the situation.<sup>15</sup> In being thus introduced, the event will also elicit various consequences, sets now presented in the situation because of the event; the operation of tracing out these consequences, or discerning them in a situation, Badiou terms *fidelity*.<sup>16</sup> Finally – and here the full weight of Badiou's elaborate construction of the event comes directly to bear on the set of problems to which it most decisively responds – whatever operates this operation, whatever connects the event with the consequences in the situation it produces, is called the *subject*.<sup>17</sup>

The description of the formal structures of being, the event, and the subject is thereby in place; but it remains to demonstrate that anything satisfies them, in particular that "there are" (anywhere or at any time) events, that "there are" (anywhere) some subjects. And here Badiou encounters, as he recognizes, the most threatening possible line of internal objection to his interrelated doctrine of event, intervention, and fidelity. This is the challenge posed by *constructivism*, or (as Badiou glosses it) the doctrine that what can be discerned in a situation is wholly controlled by what can be said (in language) to exist. The doctrine, thus tying the possibility of discernment to description, renders impossible the event's self-nomination:

What the constructivist vision of being and presentation hunts out is the 'indeterminate', the unnameable part, the conceptless link... What has to be understood here is that for this orientation in thought, a grouping of presented multiples which is indiscernible in terms of an immanent relation *does not exist*. From this point of view, the state legislates on existence. What it loses on the side of excess it gains on the side of the "right over being". This gain is all the more appreciable given that nominalism, here invested in the measure of the state, is irrefutable. From the Greek sophists to the Anglo-Saxon logical empiricists (even to Foucault), this is what has invariably made out of it the critical – or anti-philosophical – philosophy par excellence. To refute the doctrine that a part of the situation solely exists if it is constructed on the basis of properties and terms which are discernible in the language, would it not be necessary to indicate an absolutely undifferentiated, anonymous, indeterminate part? But how could such a part be indicated, if not by constructing this very indication? The nominalist is always justified in saying that this counter-example, because it has been isolated and described, is in fact an example... Furthermore, within the constructivist vision of being, and this is a crucial point, *there is no place for an event to take place*. (pp. 288–89)<sup>18</sup>

If constructivism is right, there will never have been any event; change will be possible only as the progressive construction of new entities from old ones, language's discernment and designation of previously unnoticed possibilities. But rather than attempting to refute constructivism on general philosophical grounds, Badiou turns to the results of mathematical and metamathematical reflection on its implications in order to better specify the way in which the event "exceeds language" and thereby to demonstrate at least the *possibility* of asserting that some event has taken place.

The undertaking involves Badiou's exposition in the rarified and complex results of set theory's speculation, over the course of the twentieth century, on the nature and relations of the immense variety of infinite sets, the "paradise" of infinities to which Cantor first showed the way. An infinite set, according to Cantor's definition, is any set whose elements can be put into a one-to-one correspondence with the elements of a proper subset of itself: thus, for instance, the set of all natural numbers is an infinite one. since it bears a one-to-one relationship to the set of all even natural numbers (to match them up, we just pair each number with its double). The set containing all of the natural numbers is in fact the first infinite set; its size or "cardinality" is designated  $\omega_0$ .<sup>19</sup> As Cantor already demonstrated, however, there are *many* more. Recall that, by a fundamental theorem that Cantor already demonstrated, the power set of a set is always bigger (that is, it contains more elements) than the set itself. Thus it is certain that the power set of  $\omega_0$  is strictly bigger than  $\omega_0$  itself; this power set essentially exceeds the cardinality of  $\omega_0$  and cannot be put into one-to-one correspondence with it. The power set of  $\omega_0$  can also be identified with the set of all *real* numbers, or points on a continuum. The question that then leads to the most complex developments of set theory is one that Cantor also already posed: how much bigger is this power set, the set of points on a continuum, than  $\omega_0$  itself?

Cantor formulated the question as a hypothesis, the so-called "continuum hypothesis" which he struggled in vain through the last years of his life to prove or disprove. The hypothesis asserts that the cardinality or size of the power set of  $\omega_0$  is equal to  $\omega_1$ , the *first* transfinite set larger than  $\omega_0$  itself.<sup>20</sup> If the hypothesis holds, there is no third cardinal between the size of  $\omega_0$  and

the size of its power set; if it fails to hold, there may be one such, or infinitely many. In its more general form, the hypothesis holds that the cardinality of the power set of any infinite set is equal to the next one (that, for instance, the cardinality of  $p(\omega_1)$  is  $\omega_2$ , the cardinality of  $p(\omega_2)$  is  $\omega_3$ , and so on).

The continuum hypothesis may at first seem to represent only a very specialized problem in the development of the peculiar theory of transfinite cardinals, but given Badiou's assumptions and terminology, it actually marks a question that is essential to the success of his doctrine of the event. Remember that the power set of any set is, for Badiou, the "state" representation of what is presented in the original set. Given this, and if, as seems plausible, the sets of interest to ontology are uniformly infinite ones. then the continuum hypothesis in its general form, if it holds, asserts that the difference between a set and its state can always be marked by a uniform system of measure. The size of the state is always greater than the size of the original set, but the extent to which it is greater is strictly measurable and controllable through the succession of cardinals  $\omega_0$ ,  $\omega_1$ ,  $\omega_2$ ,  $\omega_3$ , etc. If the continuum hypothesis turns out to be true, therefore, there will always be what Badiou terms a "measure of the state's excess"; it will always be possible to determine how much "more" a representation contains than what is initially presented, how much novelty it is possible to add to the situation.<sup>21</sup> If it does not, on the other hand, this "state excess" will be unmeasurable, allowing the event full range to "wander" and "err," introducing its radical consequences in an essentially unpredictable way throughout the situation in which it intervenes.

We now know that the continuum hypothesis is neither *provable* nor *refutable* from the standard ZFC axioms of set theory. That one can neither demonstrate the continuum hypothesis or its negation means, for Badiou, that although there is no way to *prove* the doctrine of the event within ontology, there is no way that ontology can rule it out either. Nothing in being necessitates the event, but nothing shows that it *cannot* take place. And the detailed derivation of this result in fact shows a great deal about the conditions under which it is possible to think, or assert, the event. It is to the examination of these conditions that Badiou now turns.

It was Gödel who demonstrated the first half of this result, that it is impossible to *refute* (prove the negation of) the continuum hypothesis within the standard axioms of set theory. His method was to exhibit a restricted *model* of the standard axioms in which, as he demonstrated, the continuum hypothesis in fact holds.<sup>22</sup> In doing so, he made use of a formalized notion of *constructability*, which is in fact the formal basis of the constructivism that Badiou sites as the greatest threat to his doctrine. The condition of constructability places a restriction, in the spirit of Russell's theory of types, on the sets that can exist; roughly, it holds that a set can be said to exist only if it can be constructed or generated, in a regular way, from other sets that already exist. In particular, we have only sets that can be generated from other, already existing ones by taking all and only the elements that have some particular, specifiable property. The restriction yields a hierarchy of sets, the so-called "constructible universe" that, although somewhat restricted with respect to the universe of sets overall, nevertheless contains many (if not all) of the transfinite cardinals.<sup>23</sup> Moreover, because of the restriction of constructability, the sets within the constructible universe are strictly orderable into a unified and unequivocal hierarchy.

It follows that, as Gödel showed, the cardinality of  $p(\omega_x)$ =the cardinality of  $(\omega_{x+1})$ ; that is, within the constructible universe, the continuum hypothesis in its general form is provably true.<sup>24</sup> The limitation to the constructible universe formulates the natural-seeming thought that a set can only be said to exist if we can say, in terms of already existing sets, what defines it; introducing the limitation also introduces a strict measure for the excess, in Badiou's terms, of the state over the situation. Other consequences of significance follow as well. For instance, if we stay within the constructible universe, the axiom of foundation does not have to be held as an axiom, since it now follows directly from the other axioms of set theory; the effect of the restriction to constructability is thus also to require that all sets be well-founded (that is, that their decomposition halts somewhere in a basic, founding element).<sup>25</sup> Most significantly for Badiou, however, because of the restriction of constructability, in this universe there are no self-membered sets. It follows that the event, as Badiou defines it, cannot exist. The constructible universe is one in which the requirement of definability means that no event (in Badiou's sense) ever takes place.

By demonstrating one model of the ZFC axioms (the constructible universe) in which the continuum hypothesis holds true, Gödel thus demonstrated that it is impossible, in the ZFC axioms in general, to prove its negation; it is thus impossible to prove that the continuum hypothesis does *not* hold for ZFC set theory in general. The other half of the result, that it is impossible to *prove* the continuum hypothesis in ZFC, was demonstrated by P.J. Cohen in 1963. The complex technique of "forcing" that he used is, as noted, robust in its formal apparatus and subtle in its conceptual implications. For Badiou, it is significant most of all in that the demonstration that it is impossible to prove the continuum hypothesis shows also that it is impossible to prohibit the event in ontology, and indeed helps to demonstrate how it might, paradoxically, appear there by "subtracting" itself from what ontology can discern.

Cohen's general method, once again, was to construct a model; this time, however, the aim is to develop a model in which the continuum hypothesis is definitely *not* true. If there is such a model, it will follow that the hypothesis definitely cannot be proven in ZFC. The details of the actual construction that Cohen used are, as noted, complex, and go beyond the scope of a review this size. I shall therefore try to convey only a sense for

the general strategy, pausing on the parts of it that are of particular interest to Badiou.

The intuitive idea is to construct a certain kind of model of ZFC and show that within this model, we can make the cardinality of  $p(\omega_0)$  arbitrarily high (i.e., much higher than  $\omega_1$  if we wish, making the continuum hypothesis false). In order to do so, we must begin with a certain kind of set of cardinality  $\omega_0$ , the so-called "quasi-complete" sets or situations.<sup>26</sup> The strategy will then be to add to such a set a "generic" or "indiscernible" extension; if we can do so, it will be possible to show that we can make the cardinality of  $p(\omega_0)$  as high as we like. A set is called "discernible" if there is some property that discerns it; in other words, if a set is discernible within a larger set S, then there is some specifiable property that picks out all, and only, the things in S that are in that set.<sup>27</sup> In this sense, the discernible sets will be all the sets that an "inhabitant" of S can talk about, or have any knowledge about. They will also be, in an obvious sense, all that such an inhabitant can refer to with any term or combination of terms in language.

Now, the demonstration that the continuum hypothesis can fail depends on our demonstrating the existence of an indiscernible set, a set that, although real, is definitely not nameable in language, or discerned by any property we can name (Badiou symbolizes this set "Q"). We can then add this indiscernible set to an existing quasi-complete situation as a "generic extension" and the result will follow.<sup>28</sup> Cohen's technique for generating the indiscernible set, and subsequently demonstrating its existence, is a masterpiece of formalism. Intuitively, however, the idea behind it is this. We construct Q by running through all the possible properties  $\lambda$  that discern sets. For each property  $\lambda$ , however, we include in Q one element that *doesn't* have that property. Once we've run through all the properties in this way, we know that, for any property, the set we've created has at least one element that *doesn't* have that property. Thus we definitely have an indiscernible set. This set will exist, but it will not have any possible determinant (for we have constructed it in such a way that no determinant can determine it). It is in this sense that it is the "anonymous representative" (p. 371) of an existing set of parts of the original situation. Its appearance in ontology, according to Badiou, marks the free and indeterminable circulation of the errant consequences of the event.

Following the formal argument, Badiou draws out the consequences he sees in it for the theory of the subject and the possibility of truth. Art, science, politics, and love are "generic procedures"; intervention within them, by analogy with the construction of a generic extension, adds to the existing situation the indiscernible set of consequences of its event.<sup>29</sup> Such addition Badiou terms the generation of "truth"; it is to be strictly distinguished from the discernment within a situation, by means of properties, of what is (not necessarily true but) merely "veridical" in it.<sup>30</sup> In intervening, a subject "forces" a new situation which, like Cohen's

"generic extension," adds to the original situation a set of consequences which are indiscernible by any concepts or properties formulable in it.<sup>31</sup> Because they are collectively indiscernible, these consequences cannot be picked out by any term of an "encyclopedia" or schematization of possible knowledge; the consequences of an event are in this sense "subtracted" from positive knowledge.<sup>32</sup> From the perspective of the situation and its state, they remain random; only the generic procedure itself, in fidelity to the event, picks them out. The subject is then definable as anything that can practice this fidelity; the result – and with it Badiou closes the book – is an updated, "post-Cartesian" and even "post-Lacanian" doctrine of the subject. On this doctrine, the subject is not a thinking substance; it is equally not (in the manner of Lacan) a void point, or (in the manner of Kant) a transcendental function.<sup>33</sup> It is the faithful operator of the connection between the event and its infinite consequences, the generic procedure of truth in its coming-to-be.

## III.

Badiou's highly imaginative systematic construction of concepts and interpretations could be described as a groundbreaking fundamental ontology, if one of its main points were not to articulate that which, as Badiou claims, breaks with any such ontology, the paradoxical "taking place" of the event. In the tricky matter of the invocation of that which, though it "is not," is nevertheless not nothing, Badiou is in the good, if problematic, company of the similar gestures of Heidegger, Deleuze, Levinas, and Derrida. In each case, the gesture at the closure of ontology involves the paradoxes of the linguistic or symbolic formulation of what cannot be referred to, described, or demonstratively named. But Badiou, uniquely, stakes the gesture toward the "beyond of being" on the rigor of set theory, and on its apparent capability, witnessed in Cohen's technique of forcing, paradoxically to symbolize what is indiscernible to it.

The technical sophistication of the results and the precision with which Badiou carries out their interpretation will certainly earn him, as he notes, some exoneration from the accusation of linguistic unclarity that perennially vexes the reception of these earlier authors, especially in analytic circles. Yet even if the style and methods of Badiou's project do make him more accessible to analytic readers, it is not clear that his way of appealing to the rigor of set theory will not beg fundamental methodological questions that will legitimately be at issue between Badiou and some of his analytic readers in a different way. For in appealing, in the way that he does, to the rigor of set theory to found the doctrine of the event beyond the linguistic possibility of its descriptive articulation, Badiou effectively forecloses the otherwise open interpretive question of the limits of language in tracing the contours of being themselves. This question is one that has, from an early stage, been taken up centrally by the analytic tradition with which Badiou would like to find sympathy. His exclusion of it, as I shall argue in this final section, significantly problematizes the prospects for the taking-place of the event that *Being and Event* would like to be.

Even on its own terms, Badiou's appeal to the event has the paradoxical status of a call for what can never be described or identified, what indeed, even if it occurs, will remain indiscernible in its occurrence and unforeseeable in its consequences. As we have seen, there is, from the perspective of ontology, no *necessity* to the occurrence of the event; there is nothing that demands that an event must ever occur, and even if one does, there is nothing on the level of ontology that provides any evidence that it has occurred.<sup>34</sup> All that provides justification for thinking that an event has taken place is its own occurrence; nominating itself, it draws its consequences at random from what must seem to be the void. Of course, as Badiou points out, this is only how it will look from the perspective of ontology. But why should we think there is any other perspective? Why, in other words, *must* we believe that an event has, somewhere or at some time, occurred? Again, the only possible answer to this question is that it is decided by the event itself. Outside the operations of its paradoxical "fidelity," (but these are also just the everyday occurrences of science, art, politics, and love), it is perfectly possible to believe that there never has been an event in Badiou's sense. If we nevertheless do believe, our credulity will not be one based *either* in the evidence of experience or of formal demonstration. It will be the outcome of a paradoxical faith in what is "impossible," the eruption of the indiscernible in the order of what is.

Badiou will, of course, take all of this in stride; but the elusiveness of the event to positive description significantly problematizes, from within, the possibility for its doctrine to be demonstrated. For if it is indeed the case that fidelity to the event is a faith ungrounded even in the results of any positive theoretical demonstration, then even the most rigorously pursued results of set theory provide no ground for it. Those subjects who actually bring about events, or practice fidelity to its consequences, have no need for set theory, or indeed for any philosophical demonstration such as Badiou's; one will find, in Badiou's lengthy and complex text, no advice for them, no detailed description of *how* they do what they do or *what* it even means, in particular cases, to pursue the event's strange logic.

It thus appears that, despite Badiou's evident loyalty to the maxim expressed by Marx's eleventh thesis on Feuerbach, Badiou's own philosophical articulation of the structure of the event will provide no help to those who agree with his critique of the existing structures of state power or desire to bring about the intervention that could alone change them.<sup>35</sup> If one looks to Badiou's theory, therefore, for a *call* to action, one looks in vain. His symbolic *description* of what he claims to be the possibility of the

event is then, at most, a projective interpretation of set-theoretical structures and results in terms of the categories he defines.

It remains, then, to ask after the plausibility of this interpretation; that is, what is the necessity of our seeing *in* the consequences of the axiomatic structures of ZFC and the undecidabilities of the continuum hypothesis the contours of (anything recognizable as) being, the event, and the subject at all? As with any interpretation, these concepts are palpably at some initial distance from the text (in this case, the text of contemporary set theory) they claim to interpret. The nominative gestures by which Badiou identifies them have some initial plausibility, for in many cases they do indeed seem to capture real features that have made the description of evental change and its imperatives problematic for philosophy in the past. Nevertheless, this plausibility is based in imaginative projection rather than the formal rigor of demonstration. For as rigorous as the set-theoretical demonstrations may be, they do not *demand* their own interpretation any more than a literary text or poem does. Badiou thus cannot claim for his interpretative constructions the rigor of mathematics itself. Nor can he foreclose the possibility of other, even conflicting interpretations of its significance.

Badiou's interpretive projections are, as noted, indeed first-rate exercises of the philosophical imagination. And it would be unfair to exclude them, simply on this basis, from the construction and interpretation of mathematical structures in a broad sense, in which the imagination certainly plays an essential role in any case. Nevertheless, Badiou's overarching and unargued identification of mathematics with ontology tends, in some cases, to foreclose a broader metaphilosophical discussion of the methods of mathematics themselves. The plausibility even of Badiou's demonstration of the *possibility* of an event depends, as we have seen, on his ability to symbolize its deeply paradoxical structure in a way that seems to approach the outer boundaries of formally coherent thought without ever quite exceeding them by committing an outright contradiction. Indeed, in a somewhat authoritarian fashion, Badiou takes the deductive coherency within the "law of demonstrable and formalizable inference" to be the essential law of thought itself, and as we have seen, the extensions of set theory that he is thereby able to demonstrate suggest to him the inherent incapacity of a philosophical reflection based in the signifying capacities of language to demonstrate the more esoteric structures of the event.<sup>36</sup>

The philosophical sensibility underlying these suggestions evidently runs almost directly contrary to one that is expressed in remarks such as this:

124. Philosophy may in no way interfere with the actual use of language; it can in the end only describe it.

For it cannot give any foundation either.

It leaves everything as it is.

It also leaves mathematics as it is, and no mathematical discovery can advance it. A "leading problem of mathematical logic" is for us a problem of mathematics like any other.

#### And this:

125. It is the business of philosophy, not to resolve a contradiction by means of a mathematical or logico-mathematical discovery, but to make it possible for us to get a clear view of the state of mathematics that troubles us: the state of affairs before the contradiction is resolved

... The civil status of a contradiction, or its status in civil life: there is the philosophical problem.<sup>37</sup>

From the beginning of his career, indeed, Wittgenstein took up the problems of mathematical logic as problems of the critique of symbolic language in relation to its role in the life of its users, the vast variety of contexts and situations in which we may take mathematical language to have a bearing on a human life. The inquiry led him to far-ranging investigations of the leading results of set-theoretical and foundational research, including, significantly, Cantor's theory of multiple infinities.<sup>38</sup> In the remarks that take up these theories, Wittgenstein often displays a critical skepticism whose ground is *not*, fundamentally, any doubt about the rigor of these theories, but rather a reflective question about their ways of developing or projecting the structures of language to construct or project new concepts.<sup>39</sup> For Wittgenstein, no single discourse, even the privileged one of formal logic, can automatically master the truth of being or the shape of a human life. The critical question of discursive authority he thereby poses about the nature of mathematical procedures of deduction, axiomatization, inference, and proof is one to which Badiou could helpfully respond.

As we have seen, insofar as Badiou stages an encounter with the practices of linguistic criticism that have defined much of the analytic tradition at all, he does so by taking up the determinate formal implications of a constructivism that was indeed intended to capture the consequences of a restriction of "what is" to "what can be named" in a way strongly reminiscent of the positivism or nominalism of an early phase of the analytic tradition. The results of even this encounter are not decisive; by Badiou's own admission, nothing demands of the constructivist that he accept the possibility of an event, and to do so demands that he accept the existence of the self-membered sets which may seem to him the height of conceptual absurdity. But in any case, to treat the sophisticated linguistic critique practiced by Wittgenstein and other members of the analytic tradition after its initial logical positivist phase as if it were simply a form of constructivism makes a caricature of its actual methods, aims, and results. In a broader historical perspective, the aim of this critique, as practiced by philosophers as diverse as Wittgenstein, Quine, Ryle, and Sellars, is not simply to draw the boundaries of "what we can say" or refuse what simply exceeds them; it is, just as centrally, to reflect on how the structures of formal symbolism relate to the practices and objects they aim to capture. Insofar as Badiou endows the schema of the event itself with the paradoxical structure of a self-nomination that calls it into existence, he marks in it the same linguistic paradox of self-reference that underlies Russell's riposte to Frege, as well as many of the decisive results of the analytic tradition's ongoing critique of language. It is to be hoped that Badiou's dismissiveness toward this critique does not prevent his followers from taking up the still very much open question of the significance of the paradoxes on which Badiou's own doctrine trades.

For if we cannot say, simply and without an intervention whose possibility is assured only by itself, that "the event is," then it may be that we also cannot locate it beyond the boundaries of a language whose closed structure would be wholly perspicuous to us, capable of reflection in the formal discourse that expresses language's power of naming as if it were exhausted by the inventory of its names. Instead of pre-determining the vexed question of the "relative priority" of language and being as Badiou does, we might therefore prefer to continue the methods of critical reflection suggested by the analytic tradition as a reciprocal reflection in which each measures, and thus articulates, the boundaries of the other. In this reciprocal reflection, it would not be necessary to attempt, as Badiou does in paradoxical fashion, to articulate an "outside of being;" it would be enough, at the limits of what is, to gesture toward the silence whereof we cannot speak.<sup>40</sup>

The publication and translation of *Being and Event* comes at what is clearly a decisive time for the continuation of the characteristic methods of analytic philosophy, as well as for the ongoing reception of the results of the continental discourses that they have contested. It is too early to tell whether its ability to engage these discourses simultaneously will mark it as the founding event of a reconciled philosophy that continues the best methods of both traditions. But one hopes, in any case, that the authoritativeness of its appeal to the rigor of a mathematics that both presupposes and excludes the imagination on which it is founded does not prevent *Being and Event*'s readers from taking up the demands of this imagination, or seizing its freedoms.<sup>41</sup>

#### Notes

- 1. Ryle, G. (1929) "Sein und Zeit" Mind 38:151, July, pp. 355-70.
- For another recent discussion of these questions, see Maddy, P. (1998) Naturalism in Mathematics (Oxford: Oxford University Press).
- 3. Badiou, p. 10.

- 4. Badiou also uses the terms "multiplicity" and "situation" for sets. In what follows, I use these three terms interchangeably.
- 5. Badiou, p. 23.
- 6. Badiou, p. 28.
- 7. For technical reasons relating to his way of identifying set membership with presentation (see below), Badiou can call the empty set both "the void" and "the name of the void." Nevertheless analytic philosophers schooled in Frege's crucial and central distinction between "use" and "mention" may wish, if only for the purposes of expository clarity, that Badiou had been more heedful of it.
- 8. Badiou, p. 56.
- 9. Badiou, p. 95; see also the helpful chart on p. 102.
- 10. Badiou, p. 99, pp. 130–34. Technically, normality is relative to a situation; but if we consider natural numbers only insofar as they figure in other natural numbers, they are all normal.
- 11. Badiou, p. 99. If, for instance, I begin with the situation {{b, c}, {a,b,c}, b, c, d} then {b,c} is a normal term (since all of its elements are presented separately elsewhere, it is also represented); {a, b, c} is a singular term (since it contains a, which is not presented elsewhere, it is not represented), and {b,d} (for instance) is an excrescence (there are many more).
- 12. Badiou, pp. 106-111.
- 13. Badiou, p. 41
- 14. Badiou, pp. 179–81.
- 15. More technically: if X, as before, is the evental site, the intervention takes some x X as the arbitrary "name" of the event, which can then be designated  $e_x$ . The state's recounting will then include  $\{X, \{e_x\}\}$ , but what will be "invisible" to the state, since x was just an arbitrary member of X, indiscernible to representation, is the connection between the site and the event that is named by reference to its anonymous member. (p. 207)
- 16. Badiou, p. 232.
- 17. Badiou, p. 239.
- 18. The intended reference of the phrase "Anglo-Saxon logical empiricists" is obscure, since *all* of the main participants in the logical empiricist movement were, at the time of its dominance, working in Vienna or Berlin.
- 19. Two sets have the same cardinality if their elements can be put into one-to-one correspondence.
- 20. Badiou, pp. 275–80. More technically,  $\omega_1$  is defined as the smallest ordinal that cannot be put into one-to-one correspondence with  $\omega_0$  or anything smaller than it.
- 21. Badiou, pp. 278–278, p. 293.
- 22. In general, a model is a set of objects for which the axioms all hold true. If a theorem, such as the continuum hypothesis, holds for at least one model, it is not provably false (since if it is provably false, it does not hold for any model).
- 23. Badiou, pp. 299-301.
- 24. Badiou, p. 309.
- 25. Badiou, p. 304.
- 26. Badiou, pp. 358–62.
- 27. Badiou, p. 367.
- 28. Badiou, pp. 373-76.
- 29. Badiou, p. 340.
- 30. Badiou, pp. 331-34.
- 31. Badiou, p. 342.
- 32. Badiou, pp. 335–38.
- 33. Badiou, pp. 391–92.

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- 34. Badiou sometimes seems to equivocate on this point; for instance, although he clearly holds that nothing on the level of ontology, or of the existing situation in which it intervenes, can testify to the event, he also suggests (e.g., p. 180, p. 339) that "empirical evidence" or "empirical signs" can attest to it.
- 35. "Philosophers have hitherto only interpreted the world in various ways; the point is to change it."
- 36. Badiou p. 27; cf. p. 242.
- Wittgenstein, L. [1953] (2001) *Philosophical Investigations* (Third Edition), trans. by G.E.M. Anscombe. (Oxford: Blackwell).
- Wittgenstein comments on Cantor's theory, for instance, in the *Remarks on the Foundations of Mathematics* (Cambridge, MA, MIT Press, 1983); see especially pp. 131–33.
- 39. E.g. RFM II-19, in reference to Cantor's demonstration of the non-denumerability of the set of real numbers: "The dangerous, deceptive thing about the idea: 'the real numbers cannot be arranged in a series', or again 'The set... is not denumerable' is that it makes the determination of a concept – concept formation – look like a fact of nature." With respect to the self-membership of the event, as well, it is interesting to compare what Wittgenstein says about Russell's theory of types in the Tractatus. Wittgenstein, L. [1921] (2003) Tractatus Logico-Philosophicus (New York: Barnes and Noble Press) 3.33-3.333. Here Wittgenstein argues that in a clarified notation - in which each sign is used in exactly one way – it will simply be impossible to symbolize the self-membered set that leads to Russell's paradox. If Wittgenstein is right, it is indeed impossible in general to symbolize self-membered sets, and the need for a theory of types is thereby avoided. This is not, however, because self-membered sets are prohibited, in the manner of constructivism, but because the terms that attempt to name them are shown to be self-undermining. Indeed, the general orientation behind this suggestion – in which reflection about possibilities of significant symbolization in language is used to resolve or dissolve seeming philosophical problems – does not seem to correspond to anything that Badiou considers explicitly.
- 40. Cf. Wittgenstein, Tractatus Logico-Philosophicus, remark 7.
- 41. I should like to acknowledge John Bova and Adrian Navigante, both of whom read earlier versions of this review and provided helpful comments.