

# Via Subtractiva: On the Identity of Thinking and Being

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**Abstract:** This article examines the transformation of the concept of subtraction through the Parmenidean framework set out at the start of Badiou's inauguration of mathematical ontology. With the end of the *Being and Event* trilogy, how has this concept changed and what remains of the project? It is argued that the terrain has shifted towards the problem of the same and other indicated by Parmenides fragment three. A theory of diffracted alterities, a Xenoplatonism, therefore follows in *The Immanence of Truths*, one that relies on the structures of elementary embedding explored in recent set theory.

**Keywords:** Eleatism, mathematical ontology, determinate negation, generic sets, large cardinals

### **0. The end of mathematical ontology?**

Alain Badiou's publication of the final volume of the *Being and Event* trilogy, *The Immanence of Truths* in 2018 presents an opportunity for a synthetic reflection on his ontological project since the publication of the first volume in 1988. Despite some obvious philosophical continuities, some of the strategies and concepts have changed significantly across these three decades. With the closing of the three volumes on mathematical ontology, earlier in the same year (2018) of the publication, Badiou presented an account of his system that included a recantation of the thesis "mathematics=ontology".<sup>1</sup> Did Badiou abandon mathematical ontology with the closing of this project? This is not the place to sort out that complicated issue, only to note the openness that Badiou has left his philosophical project.

In order to trace the contours of this opening, we take a retrospective look at a central philosophical orientation in his work. Here we define the strategy of thought via *subtractiva* and trace its operation in Badiou's work. This clarification can show how to understand Badiou's relation to the Parmenidean expression of the identity of thinking and being by identifying the difference that allows the two to coincide. In other words, the identity of thinking and being can only be judged by a unity produced in their difference. Badiou's unique approach to theorizing this difference, in the "via subtractiva" proposed here, contextualizes the three volumes of *Being and Event*, through the context of the immanence of otherness, being determined by its self-alterity.

For our purposes here we only focus on the first and third volumes given their engagement with set theory in contrast to the algebraic concepts of the second volume. In each volume of his works on mathematical ontology, the localization and characterization of alterity form the configuration of what is at stake in these different stages. The fundamental reasoning is that since the subtractive path forecloses the givenness of unity, thinking and being are not pre-given entities

that can be brought into an identification. Instead, identity can only be established by the internal generation of the non-difference between thinking and being. In *Being and Event*, this is developed through Gödel incompleteness and the forcing of generic sets. We name this procedural subtraction, tied to the major theme of truth procedure in his work of this period. Here, alterity is developed as the excess of multiplicity over its ordering. In *The Immanence of Truths*, alterity is developed as the non-identity of the whole, and the diffraction of immanent infinities. We call this diffractive subtraction, noting the absence of procedural subjectivity in *The Immanence of Truths*.

This contrast is not meant to indicate contradictions in the system but instead to illustrate some features of the transformation of the subtractive path. This allows us to identify the problem of the “missing” subject in *The Immanence of Truths*: diffracted alterity.

### 1. Subtraction is not (a) method

Is subtraction a method? One might be drawn to calling this Badiou’s underlying method. However, Badiou generally rejects the term “method”. There are two reasons to understand why this is.

The first reason concerns the nature of philosophy. In Badiou’s notion of the renewal of philosophy, philosophy does not orient towards truth through its own resources, this orientation must be activated by events occurring outside of it. These truth procedures (in science, politics, arts, and love), are not dependent on philosophy. It is the inverse dependence. If philosophy were to be oriented towards truth, it must be practiced under the condition of these truth conditions. This practice, among other things, historicizes philosophy’s own activity in the horizon of its time by showing the compossibility of truths, a speculative synthesis of some combination of the four conditions.

Philosophy would then be transversal and unbound by methodologies which are localized in the conditions themselves. Philosophy is therefore a hybrid ground for the imposition, without pre-given valence, of many different methods as they show up often in his work. Hence, it isn’t the case that there is no method in Badiou, it is that there are plural methods located in the historical horizon of truth procedures.

The second reason emerges from ontology which, in this context, was defined *against* philosophy. In Badiou’s criticism of method in the course of *Being and Event*, he identifies four endeavors [*tentatives*].<sup>2</sup> Though Badiou doesn’t name them as such, we can call them orthology, radicalism, and idealism. These endeavors correspond with the gap opened up, essentially, by the incompleteness of mathematical ontology. This can be presented through Gödel incompleteness or Cohen independence proofs for the axiom of choice, but other notions of incompleteness as well. In short, this is the problem of the excess of

being over its possible orderings. The first orientation, orthology, seeks to “correct” this excess of being either by devising a new language, a kind of *mathesis universalis*, or by a reductive condensation of excess to order. The second orientation, radicalism, attends to the *roots* of the matter by aligning being with the excess itself. Instead of reducing or condensing excess to aspects of what is already ordered, here we valorize the multiplicity as multiplicity. The third orientation, idealism, operates through the posit of a transcendent function, a form of multiplicity, which contains ordered multiples and their excess. Here Badiou surprisingly identifies this third orientation with the large cardinal axioms of modern set theory. This is intimately linked with our later discussion, but it could be noted here that Gödel had already speculated about the resolution of open problems in set theory by positing large cardinals that cannot be proven in ZFC. Here new axioms are included to extend the possible orderings which initially appeared as excess in the models of the original system of axioms.

The fourth approach is transversal to all these approaches. Here, Badiou means that it is consistent with these approaches, but does not become reduced to them. It is transversal to these rational strategies, and though Badiou does not use the term here, this is a subtractive approach. Here he notes:

It holds that the truth of the ontological impasse cannot be seized or thought in immanence to ontology itself, nor to speculative metaontology. [...] Its hypothesis consists in saying that one can only render justice to injustice from the angle of the event and intervention. There is thus no need to be horrified by an un-binding of being, because it is in the undecidable occurrence of a supernumerary non-being that every truth procedure originates, including that of a truth whose stakes would be that very un-binding.<sup>3</sup>

The impasse of ontology, its excessive incompleteness, cannot be adjudicated in an ontological manner (either through immanence or transcendence). Instead, it requires the externality of a truth procedure to ontological ordering. To put it reductively, mathematical ontology can only indicate the excess of being (the excess of multiplicities) over all possible configurations. This excess can be disposed of in other ways, namely the three ways (orthology, radicalism, and idealism) as methodological orientation. The transversal and subtractive view therefore steps out of the ontological impasse at once by sustaining the impasse itself, refusing the resolution of the tension in each of these ways, but also supplementing an orthogonal expansion, the “supernumerary non-being”, in terms of the truth procedure.

These two anti-methodological reasons in fact refers back to the same point: the excess of truth over being. While the rationality of truth occurs within ontology, marked by being’s own incompleteness, truth

itself is unable to be given in terms of the variable possibilities of being. In other words, the being of truth can only ever be “forced” and undecidable. What is crucial here is to treat thought as aligned with this transversal and subtractive path, instead of subordinated to the configurations of order. Hence, just as truth presents an “unbinding of being” for ontology, philosophy must also “subtract” from its presupposed autonomy by a submission to these extra-philosophical truth conditions (science, politics, art, love).

This methodological rejection is therefore the grounds for a method of no-method. In practice, this often looks like a pluralism based on the ideal of compossible truths in the historical horizon of a philosophical project. Yet this transversal subtractive approach is also formulated as an alternative to the traditional interpretation of Hegelian dialectics. Indeed, the simplest expression of subtraction is the unbinding of thought from the one. This is the rejection of the givenness of unity all the way from the atomic-unit entity, whatever that might be, to the unit-totality of the whole. The unity of basic entities is a product of a process (of counting), rather than a given. Conversely, the non-existence of the “all” refers to Russell-style paradoxes: does the collection of all collections collect itself? Therefore, the dialectical coil does not quite begin to unroll.

What kind of alternative does subtraction offer against dialectics? In some places, Badiou treats subtraction as the “negative” edge of negation, balancing negation between subtraction and destruction. This strategy is therefore distinguished from others by maintaining a distance from “method” but not offering a destruction of it. In terms of the state of any knowledge, the subtractive approach remains within the situation but negates the order of the situation.

A subtraction ...is no longer dependent on the dominant laws of the political reality of a situation. It is irreducible, however, to the destruction of these laws as well. A subtraction might well leave the laws of the situation intact. What subtraction does is bring about a point of autonomy. It’s a negation, but it cannot be identified with the properly destructive part of negation.<sup>4</sup>

The difference between subtraction and Hegelian negation is therefore the determinateness of the negation, and with it, the implication of totality and teleology. The necessity of reconstituting contradiction via determinate negation identifies dialectics with ontology. Hegelian totality is drawn out and actualized through self-otherness, and self-identity, and the dynamic reflexivity of these two moments. Teleology is then the process of this relation. Overcoming is therefore a form of destruction, a negation of abstract identity, and the suspension of foundation. The negation of what exists then is brought into greater concreteness. But these and other historical problems with Hegelian dialectics brings Badiou to offer an

alternative. On this point, Badiou explicitly turns against the Hegelian/Marxist tradition:

We need an “originary subtraction” capable of creating a new space of independence and autonomy from the dominant laws of the situation. A subtraction, therefore, is neither derived from, nor a consequence of destruction as such. If we are to propose a new articulation between destruction and subtraction, we have to develop a new type of negation or critique, one that differs from the dialectical model of class struggle in its historical signification.<sup>5</sup>

What does it then mean to think in this path of subtraction? Citing Malevich, Badiou affirms here “a new day in the desert”. For Malevich in 1927, this is the suspension of the organized world of the mirrored real/ideal images through which one lives. Here Malevich notes:

No more “likenesses of reality”, no idealistic images—nothing but a desert!

But this desert is filled with the spirit of non-objective sensation which pervades everything.

Even I was gripped by a kind of timidity bordering on fear when it came to leaving “the world of will and idea”, in which I had lived and worked and in the reality of which I had believed.<sup>6</sup>

Badiou’s efforts in ontology drive for a dynamic alterization based on inconsistent multiplicity. This othering is therefore not a self-othering per se, and thus not poised toward the Hegelian telos of self-closure qua concept. Yet, without self-closure, what is identity and what is other than identity cannot be easily secured. This may be one of the more crucial and subtle reasons why Badiou turns to mathematics to articulate this dynamic. The ontology of inconsistent multiplicity, having subtracted from the ordering structure of unity, finds the process of alienation in the intra-ontological configuration of structure.

Without getting into any of the details, this alterization relies on the gap between the production of structure and its own excess. In standard readings, it is emphasized that Badiou does not have to rely on the pre-givenness of unity by generating unity, qua the unit-entity, through the mark of void  $\emptyset$ . Together with the other axioms of set theory, the mark of the void therefore “separates out” consistent multiplicity from the pure multiplicity (assumed as “without one”), generating a well-ordered universe of structured multiples (consistent) through iterated counting. Inconsistent multiplicity is therefore something of a product of structure, this is how we qualify pure multiplicity after the determination of the infinite or transfinite

well-ordered universe of multiples (sets). What is less emphasized is the fact that this universe of multiples is nonetheless no settled matter. It appears immediately that its multiplicity exceeds our means of analysis. In other words, there are structures that co-arises with the universe of consistent multiplicity which is not accounted for. Hence, if we consider the configurations of multiplicities as possible places or positions within a domain, there are positions that cannot be analytically discerned by the tools with which we set up the domain. These “generic” positions or multiplicities are therefore multiples that demonstrate an excess of structure. While excess or exception is often, in the history of thought, treated under the aegis of chaos or inconsistency, this configuration of excess is instead an excess of consistency itself. This is why truth, for Badiou, is aligned with this form of excess instead of the inconsistent multiple standing behind the ordering function of the mark of the void.

The development of this excess of structure, as opposed to the exception to structure, is central to Badiou’s work. He notes that the subtractive action is to “subtract it [reality] from its apparent unity so as to detect within it the minuscule difference, the vanishing term that constitutes it. What takes place *barely* differs from the place where it takes place.”<sup>7</sup> The concept of the generic, drawn from Cohen’s generic sets, which cannot be identified by anything other than the fact that it exists, identifies the figure of the minimal difference.

With this, we should be able to clarify “subtraction” in the proper sense from Badiou’s other notions. The generic should not be taken as a form of universal generality, not even when it is used in an ontological context. Subtraction is far from eliminativism, the reduction or negation of what knowledge or being can do without. It is not reductionism either, the reduction of reality to some ultimate plane identified with the “real”. The subtractive path proceeds neither from the verticality of a transcendent function nor the horizontality of equalization but, as we mentioned, from a transversal or diagonal path. The crucial point here is that it does not negate in a determinate way because it remains in the place of what is, while constituting a negation by means of the introduction of a form of what is not yet. It is neither confrontation and incorporation, nor is it a “line of flight”. Instead, it is the immanent reconstruction based on the fact that *what is* is always incomplete, and more varied, and more indeterminate than what can be ordered through representation. In this sense, what is universal isn’t simply what emerges from being and the differences that *erase* particularity. Instead, it is the active construction of a generic particularity (a string of singularities) that identifies or demonstrates the incompleteness of a whole, as the actuality of excess of structure over structure. No universal qua totality can therefore close the loop on multiplicity itself.

In brief, the subtractive approach of ontological alterization does not require unity because the effective opposition to structure is not

inconsistency or lack, but a surplus of structure. This reveals a necessity of the non-coincidence between being and itself. This is not because of an initial posit of an identity of being, to which something could be different or the same. Instead, this internal excess of being to itself demonstrates an identity through the gap between a generative structure and those multiples that fall outside that structure. The difference that constitutes identity is thereby gained as the result of the refusal of a completed one-totally. More than the theory of pure and structured multiples, it is perhaps here that Badiou's turn to set theory, and its 20<sup>th</sup> century history appears eminently reasonable. Fundamental debates about axioms, entities, and structure are not (mostly) about consistency, but rather about whether these plural structures are legitimate according to standards of mathematical practice, philosophically warranted, or sufficiently elegant in the eyes of the theorist. Hence the *other* of structure and reason, through which identity is determined, is not inconsistency and unreason, but being's own excess.

## 2. The limit of nature and subject

The way that the strategy of subtraction is advanced corresponds most classically to Badiou's theory of the subject and the event in *Being and Event*. We have already noted how Badiou employs mathematical ontology to offer a theory of being that designates an internal difference between ordered multiplicity, which he calls nature, and its excess, a domain of multiplicity that escapes well-ordering. Unlike traditional dialectics, the dynamics of subjectivity is not generated out of the non-identity of being with itself, and the drive to reflexive identification. Incompleteness is not a result of a disavowed contradiction somewhere that becomes latently effective. Indeed, incompleteness is an aspect of the very consistency of mathematical ontology. The incompleteness here refers to the fact that there is at least one truth of the system that is not provable by the system itself. There is then a critical gap between the system of analyzable (possible) places or multiples and truths of that system which cannot be decidable from the analysis. In other words, there are multiples that escape the well-ordered universe constructed by some system of axioms.

In *Being and Event*, the Cohen generic sets that Badiou treats as the marker of the excess of being over order represent the multiplicity that is inexhaustible by the structure of set construction and its logical control. The subject is identified by generic sets because of this self-consistency of the construction of truth outside of conventional order. These truths that fall outside of ordering therefore identifies the subject. In turn, the subject identifies the subtractive path, it identifies the actuality of minimal difference, one from which the subject constructs a new truth, not as destruction of order, but as an excess of it.

It is worth noting that across Badiou's work, we find many instances of this configuration of incompleteness. The nature/subject distinction is only the interpretation appropriate to the philosophical or meta-ontological project *in Being and Event*. This insistence on incompleteness as an excess of structure, rather than its failure, goes back to his earliest published works, typified by his response to J. A. Miller's theory of suture. Already in the 1969 "Marque et manque: à propos du zero", Badiou refuses the Lacanian alignment of subjectivity or agency with the suppression of a structural necessity of implicating contradiction with the origin of the system.<sup>8</sup> For Miller, the "unconscious" of mathematical structure qua repressed therefore unfolds structure as a repeated iteration of this primal repression. Structure is thus the iterated effect of the subject's reflexive and repressed alterization, and the "sutured" gap of consistency and inconsistency. Refusing this move, Badiou instead treats the generation of structure as a production indifferent to logical conditions. It is only with the emergence of structure through that machinic iteration that successive results of validation and consistency are applied to layers of concatenated inscriptions.<sup>9</sup> Within this debate, Badiou uses the psychoanalytic concept of psychosis to distinguish science (and in particular, mathematics) from neurotic subjectivity. There is therefore no repression, hence no suture.<sup>10</sup>

Though the framework and terms of Badiou's thought moved on after the 70s, what remained in the foreground is this insistence on the internal difference of the indifferent. That is, much like the terms of his critique of Miller, the mutual identification of structure and subject qua difference is not constitutive, but the result of the excess of the process. Hence, the nature/subject distinction is a modality of this configuration that appears early in Badiou's work. This configuration, which we shall put in general terms, therefore posits reflexivity as an aspect of structure, not its latent disavowed origin or horizon. This strategy therefore refuses the neurotic topology, an "inside" of structure maintained by the disavowal of the "outside". Instead, inscription (multiplicity) and its conceptual control are placed on a stratified and incomplete process of development. This early configuration provides the shape of the subtractive approach which treats the relation of thinking and being not as identified in the sense that they are "the same", but rather as indifferent. On the one end, no difference is yet able to render them distinct. As differences multiply, no difference is capable of rendering them equivalent.

### 3. Eleatic dialectics

Given the framework of the subtractive strategy, we are able to revisit the grounds of this identity of thinking and being. The contents of Parmenides's poem *On Nature* have been present in the history of metaphysics from in Plato, Aristotle, Plotinus, and so on. We have to

forego this rich history and focus here exclusively on the key fragment III, which Badiou often cites albeit in a simplistic way, without much further philological explanation. The passage reads:

τὸ γὰρ αὐτὸ νοεῖν ἐστὶν τε καὶ εἶναι ... [to gar auto noein estin te kai einai]<sup>11</sup>

A very literal translation would be:

For thinking and being are the same thing...<sup>12</sup>  
Denn [das Seiende] denken und sein ist dasselbe.<sup>13</sup>

This overly literal translation is common in French translation by Beaufret.<sup>14</sup> This is adopted by Badiou and Feltham's English translation.

[L]e même lui est à la fois penser et être...<sup>15</sup>  
The same, itself, is both thinking and being.<sup>16</sup>

Two commonly cited English translations (Burnet and Zeller) have the fragment rendered:

[F]or it is the same thing that can be thought and that can be.<sup>17</sup>  
The same is for thinking and for being...<sup>18</sup>

These all mean quite different things and there seems to be no end to what can yet be said about this passage. However, we shall have to satisfy ourselves with a brief discussion. The central question in interpretation is whether to treat thinking and being as substantives, a datival infinitive, or something else. In other words, the question is whether thinking and being are the same thing, whether there is something that can be thought can also be, or alternatively, anything that can be thought can also be, and vice versa.

Given the grammatical context, scholars like Coxon argue against the use of the substantive infinitive.<sup>19</sup> This rendering, closer to the Burnet translation above, is to assert a common entity that is *for* thought and being. Here, that which can be thought is the same as that which can be. This is poised against the more traditional reading of the coextensiveness of thinking and being, emphasized in the classical reading by Diels and Beaufret, which also tends to be the implied interpretation of Badiou's frequent readings. These important details offer different solutions to how to understand the status of the one and non-one in the Parmenides work, in particular, the possible discourse on what is not, or what both is and is not. The result is the puzzle of the poem explicitly performing what is apparently rejected by the poem, the discourse on the multiple.

Plato can be understood as following Parmenides in accepting the terms of the puzzle but admitting the discourse of what is not through the foregrounding of unity. Appearances therefore gain intelligibility through their participation in the forms. It is through modes of unity that reasoned accounts can be given to the many and the false. Multiplicity therefore gains its reality through the forms, which are unities that stabilize aspects of what would otherwise be inconsistent multiplicity. Though the forms are systematically articulated in many of Plato's works, in the crucial dialogues that treat the nature of the one/multiple, the *Sophist* and the *Parmenides*, it is clear that Plato devises no final answer and he leaves many strands of the argument open. Badiou develops in *Being and Event* the unfinished lemmata at the end of the *Parmenides* to suggest a theory of inconsistent multiplicity, a point to which he often returns.

What Badiou ultimately draws from this Parmenidean/Platonic puzzle is a rejection of oneness as the solution. Instead of the Platonic forms as the fulcrum between absolute unity and muddy multiplicity, it is the affirmation that the "one is not" which finally stabilizes this inconsistent discursive fluctuation between what is and is not.

In the Seminars of 1985-86, the years leading up to *Being and Event*, Badiou affirms this "decision":

If it is necessary to "expressedly think the path of nothingness at the same time as the path of being", this is because the essence of what is at stake there is the decision. It is not due to the necessity of synthesis or to think them at the same time, no! Because if what is to be decided is to decide philosophy, it is naturally necessary to conjointly think the paths of the decision.<sup>20</sup>

The decision Badiou offers here is a subtractive one. Against synthesis or affirming the paraconsistency of contradiction, the subtractive path remains in the tension while inscribing the mark of the void which affirms the *non-being* of the one and the *being-nothing* of pure multiplicity.<sup>21</sup> In this subtraction, thinking and being are identified insofar as their conjoining is constituted by the mark of the void. The consequences of this subtraction are precisely what is unfolded by mathematical ontology. He helpfully summarizes this point in recent reflections.

To think the multiple-without-one, the count-as-one is necessary. All operations of thought is the count-as-one of any multiplicity, a taking away of being from inconsistent multiplicity which is unrepresentable, being in its most indeterminate sense. The error of Parmenides is to have worked from the position of identity and not from difference. His error is to hypostasize the count-as-one as if it were being itself. This is quite impossible. What there is is difference and this difference can be counted-as-one.<sup>22</sup>

We can notice here Badiou's characteristic interpretation of this subtracted "sameness" of thinking and being. Parmenides's error is to treat the hypostasis of the count-as-one as being (as such). In turn, it is difference that should be counted (as one). Difference is not here something pre-given in multiplicity. As he notes at the start, the thought of this multiplicity requires this count-as-one. Hence, without appealing to the one and the same, and without the Platonic synthesis of the one and the many, the act of the count, identified here as the operation of thought simpliciter, divides what is counted from what is uncounted, and therefore constitutes difference within indifference.

This analysis therefore shifts its focus from the one and the many to the notion of difference as such. As we examined above, there is no such thing as unity as such. This is a production of the count. Within the same logic, there is no such thing as difference as such. The reason here is that unity, whether primordial or produced through the count, is a logical necessity for difference. However, could we trace a theory of difference subtracted from this one-multiple dialectic?

In a recent discussion, Badiou highlights this possibility.<sup>23</sup> In his revisiting of the Parmenidean fragment in 2023, Badiou affirms the co-determination of thinking and being insofar as they cannot represent the givenness of difference/alterity.

When Parmenides posited that being and being known are the same thing, he was right even if he did not manage to sufficiently clarify all the consequences of his position. That is why I think we need to significantly rework the notion of the subject. If we introduce the category of the subject, we must immediately place it in a singular and homogeneous relation to being. Otherwise, we will end up with an infinite chain of idealistic apparatuses in which the knowing subject is on the one side, and the known object on the other. In reality, the problem is that there is no intrinsic difference between what we know and the known subject, and that we can perfectly have the known subject as the object of knowledge, since there is reflexive thought, and so on. [...] Parmenides is at the heart of the very definition of materialism.<sup>24</sup>

Here Badiou has put the dialectic of the one and multiple aside in favor of the alterity of thinking and being. The condition for their identification requires that the former encounters the other as an other. Therefore, as he notes, an infinite chain of idealistic apparatuses must be employed to close the gap. It is only if thinking and being are coextensive that this difference can be treated as internal to this configuration.

It is important to highlight Badiou's identification of this identity of thinking and being as the "very definition of materialism".<sup>25</sup> This should be read in the lineage of a specifically Marxist and Leninist understanding

of the problem. Here, both dogmatic idealism and materialism results in the same quandary if the opposition between being and knowing is held as a given.<sup>26</sup> The dogmatic materialist struggles to formulate non-ideal characteristics of matter, resulting in mere haecceity that subtends properties and attributes which are ultimately ideal. For Lenin, whose explicit target was the preeminent physicist Mach, it is Berkeley that formulates this horizon in his idealist empiricism.

In other words, just as there is no unity or difference as such, there is no sameness or difference as such. If we focus on the latter pair, we are led to affirm that the identity of thinking and being cannot be given. In this sense, the co-determination of thinking and being represents the generation of alterity internal to this indifference. As such, this co-determination can only be affirmed if thinking and being are mutually differentiating. This restatement of difference within indifference offers a new perspective on an old configuration. We examine the consequences of this configuration briefly.

The main consequence an inverted interpretation of the Arch-rationalist principle: *omnis determinatio est negatio*.<sup>27</sup> For Badiou, being's self-alienation is not a negation of some particular thing, neither is it that to itself as if it were a determinate thing. Self-negation does not occur as the negation of something because this is prior to the possibility of some "self"-thing. Instead, the negation here is poised against an incomplete, indeterminate being. The thinking of being as the thinking of a non-objectival self is therefore the process of the multiplication of incomplete partial subordinate objects which attempt to map the structure of this unlimited attempt to gain actual objectivity-alterity. Therefore, the ordering structure here is the process through which to gain proper alterity. This ordering and what results are the externalization of the object from thought. A given partial alterity is synthesized into higher forms of unity. Yet no resolution is possible if alterity is perpetually, as an asymptotic limit, inactual.

This inversion of the rationalist principle can be read through all three volumes of *Being and Event*. The first volume follows most classically in the subtractive path discussed above. The dialectic of the one and many is suspended for the consequences of unfolding the mark of the void. Thought seeks its own alterity within this unfolding of multiplicity. As this infinite process unfolds, thinking and being converges at the point of the failure of the process in the undecidable. This is the incompleteness of the process which renders the subtracted space where thought intervenes qua subject/generic. The second volume is not as explicit about this process but what results in the theory of worlds is a localization of forms that measure the value of appearances in each locality. On one end is the minimal value of in-existence of multiplicities with no appearance, on the other end is the maximal value presented by the transcendental envelope of the world in question. In this algebraic context, difference and identity are constituted by

local morphisms, that is, permissible transformations. Forms generate the plurality of localized identities of the limit between thinking and being. The third and final volume is based on models of set theory with large cardinal axioms. In this expansion of set theory, the limits of the original theory are expanded to deliberately include sets that challenge the traditional properties of the theories. This all takes place in the confines of a set theoretical universe that is consistent with that of traditional ZFC. These new orders of infinity allow for the construction of models that demonstrate the failure of the axiom of choice or some version of the continuum hypothesis.<sup>28</sup> Badiou's overall strategy in this volume is to consider the expanded universe of large cardinals as readjusting the limits between nature, schematized by well-ordered universe of constructible sets  $L$ , and truth, schematized by those multiples that fall outside of  $L$  in the Universe  $V$  class of sets. This renders the limit between nature and truth without a fixed form or region, diffracting this difference into Universe  $V$  based on the models used to analyze the Universe. Again here, there is the suspension of dialectics qua determinate negation in a diffracted distribution of the convergent edge of nature/truth. We will come back to this point.

The support of this inversion of rationalism lies in the local unities, the subordinate entities that emerge in this process. The production of difference is the capacity to establish identity qua entities. On the other side of the suspended indifference between thinking and being inscribed by the void are these subordinate unities as the local markers of difference. These forms of thought, local unities qua difference, are the very means by which thinking receives a diffracted self-identity or incomplete self-othering. Forms are therefore the means through which this identity of thinking and being is negotiated. These forms once again play an inverted role in contrast to traditional Platonism. Instead of form standing over particulars, these forms are generated out of an indeterminate multiplicity through which particulars are distinguished.

The Eleatic puzzle is usually read by Badiou through the Platonic tradition driving the treatment of multiplicity and oneness in the *Parmenides*, through the many-through-one πολλά *polla* and the many-without-one πλήθος/*plithos*. Here, although I appreciate the terminology of a “dynamited Eleatism” in Vartabedian's work, a concept that would also have to be more fully elaborated through Democritian and Lucretian Atomism, the emphasis on alterisation would instead recommend a “Xenoplatonism”.<sup>29</sup> That is, a theory of forms where the relations of difference, or that of same and other cannot be pre-given in such a way as to provide the grounds of negation. Instead, only the suspension of the dialectic provides subtractive forms in which this indifference generates diffracted localized difference. At its limit, an unmediated perfected knowledge where thinking and being can be completely identified would therefore require a completed distinction between them. This form of self-identity would require no mediation and therefore no forms.

#### 4. Universe V as subtractive strategy

From this Xenoplatonist reading, Badiou's focus on the universe of  $V$  in *The Immanence of Truths* offers an extension of the configuration developed in *Being and Event*. Just as sets are never defined, the universe of sets  $V$  cannot be a set. The axioms of any particular system of axioms, ZFC, for instance, give the rules for what sets there are. The most obvious of these are those sets which can be constructible from the rules set out by the axioms. But these systems can be amended. Extensions of sets can be added to the constructible sets. With Cohen-Gödel generic sets, inner and outer models can be built using forcing that show certain properties to be true or false (or undecidable). It is only through these forms that undecidability is rendered concrete. Classically, this is applied to the axiom of choice and the generalized continuum hypothesis.

In *Being and Event*, the discussion of universe  $V$  itself was relatively minimal. There Badiou worked more directly with the relation between order, measure, and incompleteness. At the edge between nature and truth (or history/subject), we are exposed to forms of multiplicity beyond determinate structure. Here the subject engages in the concatenation of conditions for generic multiples, the truth procedure, where the tense is future-anterior, yet inexhaustible. In the embrace of large cardinals Badiou offers the perspective of the vastness of undifferentiated infinite multiplicity that situates any set. The new axioms invent forms of infinite measures (cardinals) that expand models to analyse moments within  $V$ . Through logical tools like elementary embedding and ultrafilters, maps can be made between these new expanded models  $M$  of  $V$  and the universe of  $V$  that demonstrate alternative properties. With very large infinities, different properties for these inner models can be discovered to blur the distinction of properties between, classically, models of the constructible universe  $L$  and the universe  $V$ . Hence, the constructive frameworks of the void, finitude, and infinities remain present but not as relevant as the articulation of these embeddings and their analytical consequences.

The most important of these concepts here is the set  $0^\#$  of numbered terms (truths in the context of *The Immanence of Truths*) that identify indiscernible ordinals in the constructible universe. Since this set  $0^\#$  cannot be proven in ZFC, their deployment follows an implicative form. If  $0^\#$  exists, then it follows that Universe  $V$  is not reducible to  $L$ . In other words, the relative finitude of the constructible universe  $L$  fails to "cover over" the unconditional infinity of Universe  $V$ . The point here is that under the condition that  $0^\#$  exists, the richness of Universe  $V$ , pertains not only to the higher infinities in question, but also to the constructible universe itself. This is the fundamental meaning for which Badiou claims the immanence of truths, no longer something "up there" vertically in the hierarchy, or even horizontally on the edges of constructibility, but also found in the unbinding of the finite, diagonally, towards indiscernible structures.

The other aspect of this approach, one that is a pre-condition for the discussion of  $0^\#$  is Kunen's theorem. It is usually written as:

Suppose  $\lambda$  is a cardinal. Then there is no nontrivial elementary embedding:  $j : V_{\lambda+2} \rightarrow V_{\lambda+2}$

In other words, either there are non-trivial embeddings of  $V$  into some model  $M$  that isn't  $V$ , or some contradictions arise.<sup>30</sup> This means that no additional structure can be gained from such an embedding of the absolute universe into itself except for mere identity. Now given  $0^\#$  exists, there can be a non-trivial embedding of the constructible universe  $L$  into  $L$ . This is due to the fact that, given that  $0^\#$  exists,  $L$  is non-absolute and limited (relatively finite). In *The Immanence of Truths*, Badiou relates this to the failure of the Parmenidean nature of the absolute.

There is a Parmenidean grandeur to the absolute, which is the dialectic between total external closure—pure self-identity—and the infinite internal bounty: the infinite attributes that express absoluteness through real difference. Finitude, for its part, can be thought in terms of its greatest strength: the covering-over of everything by what is already there. But it comes at the price of the non-existence of practically all the infinities larger than compactness, and therefore of a drastic diminution of the absolute. What is more, even at that price, finitude cannot have any inner attribute that would express it while differing from it.

For both these reasons, the universe of finitude is demonstratively incapable of the grandeur—at once dialectical and Parmenidean—that characterizes the absolute (self-identify but a multiplicity of different attributes in which truths become absolutized).<sup>31</sup>

The Parmenidean dialectic remains active in this work. There is the conflict between the external closure, trivial self-identity, and infinite internal inexhaustibility. The characteristic feature of the infinite is therefore the fact that its self-relation can produce no genuine self-identity. Instead, self-identity is only grasped through the diffracted forms in the models of  $V$ , indiscernible structures internal to the unstable “finite” world.

In a recent work, he draws on this Parmenidean connection even further.

When we are at the level of the absolute itself, we can imagine that there is an elementary embedding [plongement élémentaire] on itself. That is to say that we can pivot or turn it around on itself through the establishment of this embedding. We therefore obtain a sensational demonstration which would have delighted Parmenides. The absolute cannot be put into a relation of elementary embedding

to itself. Hence, there is no special class which would be the class of relation[s] of the absolute with itself.<sup>32</sup>

Concerning the same issue with Kunen's theorem, the characteristic of the absolute is that there is no distinct property (a difference) that renders actual the absolute's self-relation. This characteristic therefore shows that the relations of reflexivity through negation are reserved only for those at the interior of an ultimately unenclosable universe. The determinations of these infinities can only therefore be achieved by local models within this universe.

Hence, unlike *Being and Event*, we are far from the construction of the universe through the mark of the void and its iterated counting. The pressing problems are not that of sealing off pure multiplicity in order to begin the consistent multiplicities of constructible sets. There is also no fundamental separation introduced between finitude and infinity, these become relativized and defined instead by the gap between Universe L models and the Universe V that we aim to analyze. An ontology that functioned in *Being and Event* like steps in a ladder, demonstrating the indiscernible and undecidable as we move upwards, is instead navigated diagonally by the new transitive models in the domain of "finitude" (relatively defined) made possible by a maximalist hierarchy of infinities with different characteristics.

Yet here Badiou also emphasizes an alternative configuration of the subtractive path, and a different articulation of the relation between the void and multiplicity. He notes,

That is why the term "zero sharp" is perfectly justified, because the existence of what it denotes is actually the very first difference from nothing, that is, the possibility of at least one initiative, one impulse, one discovery, that is free from covering-over. The sharp tells us: our creation is not nil. It may not be far from zero, just a little half-tone away, but that is enough to convince us that we are on the trail of a new infinity that nothing will be able to cover over, nothing will be able to conceal.<sup>33</sup>

Here Badiou provides something of a drastic interpretation of the configuration. One might usually assume that the void, the finite, and the infinite are reasonably clear distinctions. Yet Badiou polarizes this difference placing nothingness and finitude on the same side, and the excessive richness of indiscernible multiplicity on the other. The reduction to finitude, the limits imposed on multiplicity by the identification of Universe V with the constructible universe L, is resisted by the thesis that  $0^\#$  exists such that, though indiscernible, there are new multiplicities exempted from this reduction. Interpretive difficulties aside, we must emphasize the subtractive strategy at work. Here, what is at stake is not

regions of ontological difference as they appear in the set theoretical idiom in *Being and Event* or the algebraic idiom in *Logic of Worlds*. Instead, the ontological difference is localized “a little half-tone away”, within the domain of finitude itself, disturbed by the irreducibility of any multiple to the covering over of the universe  $V$  by  $L$ .

With this difference of the half-tone, the process of self-othering is distributed, the truth procedure of the conditions of forcing generic sets in the gap of the incomplete is therefore exchanged for an infinite texture of multiplicity itself. This is a kind of “serialism” in contrast to the “classicism” of *Being and Event*. The divisions of a tonal series are replaced by irreducible pluralities of micro-divisions, a microtonal field. This all operates through the development of new forms, schematized here as models, through which the universe  $V$  is analyzed. The very structure of consistent multiplicities is remapped, bringing structures in infinite sets to bear on the structure of the countable infinite. To recall Badiou’s expression quoted earlier, that subtraction is something like what takes place is barely different from the place. These diffracted models of  $V$ , and the structures they reveal, are new mappings of the same “place” without the negation of consistent structure or with the synthesis of the one and the many. The identity of thinking and being therefore remains suspended as an indifference or non-distinction within which difference is operative.

### 5. Concluding remarks

The main outcome of the *Immanence of Truths* is the dissolution of the future-anterior subjective process. The identity through difference of thinking and being no longer relies on the notion of a procedural determination of what is in and out of the constructive universe. For the large cardinal theorists, this determination is already present in multiple forms for any given multiplicity. This offers a new crystalline shape to the self-othering of thinking and being. Hence, given the existence of  $0^\#$ , the new models  $M$  of universe  $V$  serve as mutually reflecting crystallizations producing alterity at the heart of each intersection of form and multiplicity.

If we then circle back to Badiou’s recent renunciation of the thesis that mathematics is ontology, the ontological development here offers something of a subtractive approach. That is, the question of the identity between mathematics and ontology is now re-presented as unstable and diffracted across domains, with local configurations offering temporary stabilization of these identities.

The Parmenidean identity of thinking and being was suspended by their mutual indistinction. It is through the mark of the void that this indistinction becomes productive of difference. That is, difference is not given. It is generated out of this refusal of the dialectical determinate negation. The resulting configuration, explored in *Being and Event*, demonstrates the incompleteness of ordering that provides the grounds

of subjectivity as the ontological excess over nature. In the recent work, this ontological excess is diffracted or distributed across being. Truths are immanent to being. This uncovering requires no constructive procedure. Yet, though the subtractive path has been given in a different configuration, the necessity of mathematical form remains central to the possibility of this idea. The configurations offered in the *Immanence of Truths* are not available outside of the analytic concepts in large cardinal set theory. More crucially, the standard bearers of the large cardinal theories like Woodin, inter alia, affirm that the crucial theorems therein have yet to be proven. With possible changes to the status of the axiom of choice or the generalized continuum hypothesis, unattended results could indeed arise. Yet the *via subtractiva* remains the means through which we are to suspend the traps of Parmenidean identity. It appears then that even if Badiou might be done with mathematics, it is certainly not done with us.

- 1 Alain Badiou "Five Points: Final Speech," Thinking the Infinite, Hosted by the Prague Axiomatic Circle, Prague, 2018, <https://www.youtube.com/watch?v=iWws287P1OU>.
- 2 Alain Badiou, *Being and Event* (Continuum, 2005), 282–85.
- 3 Badiou, *Being and Event*, 284.
- 4 Alain Badiou et al., "'We Need a Popular Discipline': Contemporary Politics and the Crisis of the Negative," *Critical Inquiry* 34, no. 4 (2008): 652–53.
- 5 Badiou et al., "'We Need a Popular Discipline': Contemporary Politics and the Crisis of the Negative," 652–53.
- 6 Malevich Kasimir, *The Non-Objective World*, trans. Howard Dearstyne (Paul Theobald and Company, 1959), 68.
- 7 Alain Badiou, *The Century*, trans. Alberto Toscano (Polity Press, 2018), 65.
- 8 Jacques-Alain Miller et al., *Concept and Form, Volume 1: Selections from the Cahiers Pour l'Analyse*, ed. P. Hallward and K. Peden (Verso Books, 2012), 159–86.
- 9 Lucca Fraser, "Introduction – The Category of Formalization: From Epistemological Break to Truth Procedure," in *The Concept of Model: An Introduction to the Materialist Epistemology of Mathematics*, by Alain Badiou, ed. and trans. Lucca Fraser and Tzuchien Tho (re.press, 2007).
- 10 See Lorenzo Chiesa, "Count-as-One, Forming-into-One, Unary Trait, S1," No. 1, *Cosmos and History: The Journal of Natural and Social Philosophy* 2, nos. 1–2 (2006): 68–93.
- 11 Hermann Diels, ed., *Lehrgedicht: Griechisch und deutsch* (De Gruyter, 2013), 33, <https://doi.org/10.1515/9783111546100>.
- 12 Parmenides et al., *Fragments: A Text and Translation* (Univ. of Toronto Press, 1984).
- 13 Diels, *Lehrgedicht*, 33.
- 14 Parmenides, *Le Poème de Parménide*, trans. Jean Beaufret, with Jean Beaufret (Presses Universitaires de France, 1955).
- 15 See Alain Badiou, *L'Être et l'évènement*, *L'Ordre philosophique* (Éd. du Seuil, 1988), 49; Alain Badiou, *Court traité d'ontologie transitoire*, *L'ordre philosophique* (Éd. du Seuil, 1998), 96. The source here is Parmenides, *Le Poème de Parménide*, 79.
- 16 Badiou, *Being and Event*, 38.
- 17 John Burnet, *Early Greek Philosophy*, 2nd ed. (Adam and Charles Black, 1906), 199.
- 18 E. Zeller, *Die Philosophie Der Griechen*, I (Leipzig, 1923). Quoted in A.H. Coxon, "Parmenides on Thinking and Being," *Mnemosyne* 56 (2003): 210–12.
- 19 Coxon, "Parmenides on Thinking and Being."
- 20 Alain Badiou, *Le Seminar - Parménide. L'être 1 - Figure Ontologique* (Éditions Fayard, 2014), 39; my translation.
- 21 Badiou, *L'Être et l'évènement*, 53–54; Ray Brassier, "Presentation as Anti-Phenomenon in Alain Badiou's Being and Event," *Continental Philosophy Review* 39, no. 1 (2006): 59–77.
- 22 Jana Ndiaye Berankova and Alain Badiou, *L'éclat de l'absolu: dialogues avec Alain Badiou* (Suture Press, 2025), 107; my translation.
- 23 Forthcoming as Alain Badiou et al., "Overlap: Interview with Alain Badiou," in *M=O?* (Suture Press, 2026).
- 24 Forthcoming in Badiou et al., "Overlap: Interview with Alain Badiou."
- 25 Badiou has also developed an earlier theme of "the non-dialectical or inseparable unity of a theory and a practice" in the 2000s. See Alain Badiou, *Infinite Thought: Truth and the Return to Philosophy*, Bloomsbury revelations edition, trans. Oliver Feltham and Justin Clemens (Bloomsbury, 2014), 79. Thanks to Frank Ruda for a reminder of this.
- 26 V.I. Lenin, *Materialism and Empirio-Criticism* (Foreign Languages Press, 1972). For a classic treatment of this problem see Lucio Colletti, *Marxism and Hegel*, trans. Lawrence Garner (Verso Editions, 1979).
- 27 Benedict de Spinoza, *Opera*, ed. Carl Gebhart, 4 with Supplementa (Carl Winters, 1925), vol. IV, 240, 6-15. Georg Wilhelm Friedrich Hegel and George Di Giovanni, *The Science of Logic*, Cambridge Hegel Translations (Cambridge university press, 2010), 87.
- 28 See W. Hugh Woodin, *The Axiom of Determinacy, Forcing Axioms, and the Nonstationary Ideal*, vol. 1, De Gruyter Series in Logic and Its Applications (De Gruyter, 1999).
- 29 See forthcoming Becky Vartabedian, "Three Stories About Decision: Badiou, Parmenides, And The Persistence Of Thinking Being," in *M=O?* (Suture Press, 2026). As an alternative, Roden's Xenophilia is also pertinent. See David Roden, "Subtractive-Catastrophic Xenophilia," *Identities: Journal for Politics, Gender and Culture* 16, nos. 1–2 (2019): 40–46, <https://doi.org/10.51151/identities.v16i1-2.371>.
- 30 W. Hugh Woodin, "IN SEARCH OF ULTIMATE- L THE 19TH MIDRASHA MATHEMATICAE LECTURES," *The Bulletin of Symbolic Logic* 23, no. 1 (2017): 13, <https://doi.org/10.1017/bsl.2016.34>. Akihiro Kanamori, *The Higher Infinite: Large Cardinals in Set Theory from Their Beginnings* (Springer, 2003), 320–21. See also W. Hugh Woodin, "The Realm of the Infinite," in *Infinity*, 1st ed., ed. Michael Heller (Cambridge University Press, 2011), <https://doi.org/10.1017/CBO9780511976889.006>.
- 31 Alain Badiou, *The Immanence of Truths: Being and Event III*, with Kenneth Reinhard and Susan Spitzer (Bloomsbury Publishing Plc, 2022), 396.
- 32 Berankova and Badiou, *L'éclat de l'absolu*, 385.
- 33 Berankova and Badiou, *L'éclat de l'absolu*, 391.

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