

## *Original Paper*

# Badiou's Conception of Truth: A Mathematical-ontological Perspective

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### **Abstract**

*Alain Badiou, one of the most influential French philosophers, weaves together mathematics, subject, and truth, taking mathematical ontology as his point of departure to articulate a distinctive conception of truth within the postmodern intellectual landscape. Beginning from the category of contingency, he argues that within the dominion of the one, uncontrollable events erupt, and it is precisely at such sites that truth makes its advent. As the truth procedure unfolds in the wake of a contingent event, the individual—through fidelity to the event—becomes a constitutive element of this procedure and participates in shaping the new body of truth. Badiou inherits the materialist core of Marxism while, against the prevailing currents of pluralism and relativism, reaffirming the existence of truth.*

### **Keywords**

*Badiou, mathematical ontology, truth*

## **1. Introduction**

What kind of philosophy is philosophy today? Has philosophy already reached its end? Marxist philosophy holds that the material world constitutes the foundation upon which human existence and development unfold, and that practice forms the bridge linking thought and being. Through the objectifying process of practice, human beings come to know the world while simultaneously transforming it. Practice yields truthful knowledge, and practice in turn serves as the criterion by which such knowledge is tested. The finitude of human cognition reaches toward the infinitude of truth precisely through the mediation of practice, enabling a correct apprehension of the world; practice thus becomes the key both to pursuing and to verifying truth. In the post-truth era, however, philosophy finds itself in an increasingly awkward position. The age in which being and non-being were thought together has passed; philosophy now sinks into poetic metaphor or retreats into evasions of Dasein, with poetry becoming the true glimpsed only obliquely through figuration. Under the dominant tide of

skepticism, everything appears plural, fragmented, and contingent, and human beings can no longer locate any determinate existence amid the surging flux. At a moment when universality seems on the verge of disappearance and metaphysics itself appears to be vanishing, does philosophy in the modernized world still possess a future? Does metaphysics retain any ground for its existence? Is our pursuit of truth, as Derrida suggested, nothing more than an endless tracking of Marx's specter through the interstices of writing?

Badiou responds to these questions by drawing on the distinctive measurability of mathematics in conjunction with Cantorian set theory. Within the post-truth era, Badiou is widely regarded as a Marxist; like Marx, he affirms that although human cognition remains constrained by the manifold conditions of the existing world, truth nonetheless descends inexhaustibly into every corner of that world. At a time when truth has been reduced to fragments, Badiou refuses to abandon the pursuit of infinite truth, seeking instead the traces of articulation within the discontinuous multiple. From an ontological standpoint, he draws truth back into the worldly domain, returning philosophy to the metaphysical inquiries of ancient Greece, and, through this return, rendering the existing order intelligible anew. He contends that the present age is one of subjective impasse, in which the world appears as a multiple in which heterogeneous significations coexist. If the world were wholly enveloped in the inescapable rule of the one, then the multiple itself would attest to the existence of latent points of rupture not yet manifested—a future, an uncontrollable event—through which the advent of the true remains a live possibility for the world to come. Such transformation embodies a negation of the prevailing one, signals the hope of breaking through entrenched structural systems, and bears witness to the unforeseeable possibilities of worldly development.

### *1.1 Mathematics as Ontology*

Why do things present themselves precisely as they do? The question of being qua being has remained an inescapable problem throughout philosophical reflection, and disputes surrounding it traverse the entire history of philosophy. As Plato observed, what is not a being is not a being. And the worlds of this-being and that-being are sharply demarcated. How might one establish a passage between them? How can one ascertain that what thought renders manifest is genuinely true? Innumerable philosophers have charted divergent paths in response. Plato himself partitioned reality into the intelligible and the sensible: in the intelligible world, human beings acquire, through learning, knowledge of the one and thereby attain a universal concept of being, whereas the world of the multiple appears as a dim chaos, an inexpressible heterogeneity. The human soul already bears within itself the knowledge of truth; through learning, one recollects this innate knowledge, lives a life of genuine worth, escapes the obscurity of the cave, and accomplishes the turning of the soul. In medieval philosophy, the true was identified with the incarnation of God, and philosophical speculation was conceived as an approach to the omniscient and omnipotent divine. With the advent of Humean skepticism, however, philosophy's grip on the certainty of the true gradually loosened, and the world of ideas and the world of phenomena ceased to cohere into any unified whole. Kant's Copernican revolution restored knowledge to humanity,

yet at the same time stipulated that human understanding consists in the conjunction of transcendental logic with sensible material, while the world of the thing-in-itself remains beyond the reach of human intellection. Like the Platonic multiple, the genuine world of things-in-themselves cannot be attained by us. Our cognition of laws is confined to the human horizon, rather than constituting any grasp of universal truth. Human freedom resides in legislating for nature while simultaneously legislating for oneself; reason functions as a moral power exerted within a world of natural selection, and it is by preserving moral freedom that one seeks the reality lying on the far side of the thing-in-itself.

If human beings, proceeding from themselves, cannot resolve the question of being qua being, Badiou must return once more to the Platonic discussion of the one and the multiple, and to the mathematical lineage embedded therein. The logical articulation of mathematics manifests as a science of the true, an operation that counts truth-values as one, which entails that within the domain of number an absolute truth becomes attainable. Standing on the shoulders of his predecessors, Badiou declares: *mathematics is ontology—the science of being qua being* (Note 1). Cantor had already linked mathematics with philosophy, treating philosophy as an abstract totality of sets and the set as an alternative form in which thought displays itself. Yet his work also gave rise to the paradoxes of set theory: as the extension of a concept, the set is articulated through formalized language. Here, the set comes to embody a truth-value rendered in formal language, becoming the guarantor of linguistic correctness, and is able to express the existing multiple only through that language. This implies that were formal language possesses a complete structure, and no logical incoherence could arise, and a grasp of formal language would suffice for a grasp of the multiple. Reality, however, presents an outcome at variance with what the set–language system anticipates. Badiou therefore maintains that a set expresses a given concept only under specific conditions, and that the inherent non-coherence of formal language renders pure multiplicity inexpressible. The story of Russell’s paradox is familiar: if a barber shaves all and only those townspeople who do not shave themselves, does he shave himself? Letting P designate the barber, P exceeds the system of sets, and the paradox redirects set theory along another path—one on which such inexpressible multiples (P) come to be regarded as the absolute infinite.

Cantor took this unhouseable P to be the work of God, whereas Badiou discerns in it the coherence and non-coherence of the multiple. As he writes: *the axiom system of the particular inconsistency of multiplicities seizes the in-itself of the multiple by forming consistency all inconsistency and forming into inconsistency all consistency* (Note 2). the multiple resides at the root of the one. The emergence of the ZF system and the development of first-order logic furnish further confirmation of the multiple’s deployment. First-order logic specifies that whenever a given term satisfies the requirements of a proposition, it conforms to the eternal truth of the theorem. What distinguishes this approach from traditional set theory is that sets are no longer expressed by way of their elements; rather, suitable terms are placed within the set. Whereas the domain of traditional set theory is determinate—admitting only of a procedure of description, the domain of first-order logic is an infinite multiple, and the procedure performed within it is one of selection.

The axiom of extensionality states that the uniqueness of a given set is determined solely by the elements it contains. This indicates that the one that is presented (the set) is not a continuity in the traditional measurable sense; its primordial structure is constituted by the many elements that have been defined. The concept of the one thereby becomes a unit of measurement, the result of an operation. The infinite extension of sets further expresses that the world contains infinitely many elements and infinitely many modes of combination, attesting in turn to its infinite possibilities. Mathematical formalism, as the symbolic articulation of set theory, renders such computation more tractable. From this Badiou draws his conclusion: its inconsistency does not come to light, nevertheless, its count-as-one being an operation itself indicates that the one is a result (Note 3). The one and the multiple do not stand in a relation of opposition: the multiple has no need of the existence of the one in order to manifest its own being, while the existence of the one requires the infinite multiple. As he remarks: *All the 'objects' of mathematical thought—structures, relations, functions, etc.—are nothing in the last instance but species of the multiple.* (Note 4).

Within the world of this-being, the one manifests as a coherent existence, whose locus Badiou designates as the situation—a set. The situation is capable of presenting the existence of the multiple while sustaining a structural operation through which the multiple is counted as one, thereby furnishing the conditions under which the one enters into presence.

This operation indicates that the multiple can be apprehended as the antecedent term of the one, and that the one is the result of the multiple within the situation, the multiple as structured. If the one is conceived as the structuring of the multiple, then the multiple is the inconsistent multiple, while the one is the consistent multiple. As for non-being—this inconsistency—it inheres within the set yet eludes articulation by formal language. All multiples are originally inconsistent, and within the consistent one, there persists a multiple that cannot be exhibited within structure. No structure can present such a multiple or subject it to the count. Yet it is not for that reason non-existent; it is merely unable to be presented. What, then, is this thing that cannot enter into presence and yet must necessarily be? Badiou here appropriates a particular mathematical concept: the void.

Designated by the symbol  $\emptyset$ , the void is defined by Badiou as the unrepresentable that is presented: *The 'nothing' is what names the unperceivable gap, cancelled then renewed, bet-ween presentation as structure and presentation as structured-presentation, between the one as result and the one as operation, between presented consistency and inconsistency as what-will-have-been-presented* (Note 5).

From the standpoint of set theory, the extension of a set in itself signifies infinitude and indefinability. The elements of a set, under different functional procedures, form different concatenations and compose a term. Through homogeneity—the configuration disclosed by the operation of some function within the set—the world of this-being becomes intelligible to us. Non-being, for its part, is the non-totalizable portion of the set; it cannot constitute a term within a given set and figures as the inconsistent multiple. Yet the set itself encompasses both this-being and non-being: non-being is not

non-existent but simply un-presented. At this juncture, the infinitude of the set's extension manifests the unforeseeability of the set's composition, while attaining identity through the count.

Beyond this, set theory contains a fundamental definition: the empty set is a subset of every set. The empty set is characterized by the absence of any extension and any term. Its extensiveness is therefore infinitude itself: as something that admits of no definition, the empty set can stand in for any term whatsoever; it is itself the multiple, the very name of the indefinable multiple. The privilege of the void lies in its constitutive infinitude. As a subset of every set, it possesses unbounded creative capacity: the void may open onto any set and be exhibited within any set. Every set thus harbors this infinite creative capacity, and with it infinite possibility, providing the ground on which the diverse modes of being may come to appearance. As Badiou puts it: *void would be being as non-being or un-presentation—fullness, being as being—consistency—and place, being as the non-existing limit of its being—border of the multiple by the one* (Note 6). This void is nevertheless distinct from the one; it cannot become the dominant great one in the traditional sense. Whether earlier philosophy took its bearings from abstract ideas or from the synthesis of experience, it always proceeded from a determinate source out of which different philosophical systems were constructed. The void, by contrast, is neither terminus nor origin but a wandering specter that persists throughout the entire process while never entering into presence. It cannot be fixed by any method, and yet it dwells at the intersections among the subsets of a set. It is not the commonality of elements but a being that one cannot approach yet may follow—in a certain sense, a trajectory of development. Thus, philosophically, the void presents itself as the subset within which truth makes its advent: it can be defined by way of categories and conforms to the operative norms of set theory; it is neither the void in an ontological sense nor the void in the sense of existence. It is precisely on this account that philosophy gains the space within which to enter into dialogue with the several truths.

Badiou simultaneously cautions: *you will not be able to avoid the errancy of the void; you will have to place its name* (Note 7). If being qua being is not to vanish—that is, if the one we are able to cognize is not to dissolve—then the one, characterized by coherence, must ensure that the inconsistent void cannot accede to presentation through its own resources. Let us return to Russell's paradox: that P, which cannot be set-theoretically rendered by the rule of the count, escapes the count for the very reason that it is the rule of the count itself; this non-being extricated from structure is the site where the void descends. In order to safeguard the coherence of presentation, structure must itself be structured, since what is presented is the inconsistent multiple though not for that sheer chaos. Two successive counts are accordingly required by which the extension of the structure is sealed off and the coherent one is thereby secured. Within the situation, then, two modes operate: presentation and representation. Presentation is, first of all, the locus where the multiple subsists; it is the structuring procedure of the count-as-one, the basic grasp of the multiple of multiples, and is termed the meta-structure of the situation. At the same time, within presentation, there exists another that cannot be subjected to the operation, and a second count becomes necessary if the count-as-one is to retain its stability within the

situation. To track down this spectral non-being, representation must be enacted upon the meta-structure of the situation, and the multiple subjected to this second count is designated the state of the situation.

Badiou writes: *The great lesson of Spinoza is in the end the following: even if, via the position of a supreme count-as-one which fuses the state of a situation and the situation (that is metastructure and structure, or inclusion and belonging), you attempt to annul excess and reduce it to a unity of the presentative axis* (Note 8).

Then, is the legitimacy of this second count upon the meta-structure to be secured? The question once again leads back to the empty set. The excess within the meta-structure constitutes the site at which the empty set subsists: the empty set has no term belonging to the meta-structure, yet it remains a subset of it. It is neither in presence nor among the elements that belong to the situation; rather, it is one of the many parts that make up the situation. Recourse to the axiom of separation makes this intelligible: any set  $M$  contains at least one subset  $M_0$  that is not an element of  $M$ . This indicates that however indefinitely a set is separated into the various subsets composed of its elements, there will always emerge a subset that cannot be so separated. Within a situation accordingly, only that which belongs to the situation is presented, while what is merely included in the situation subsists abstractly and figures as non-being. The advent of the state of the situation is precisely what enables the void—as something included within the situation and belonging to its state—to be counted-as-one by the structure of the state, becoming a coherent multiple that may be named by the one. Insofar as the state of the situation includes the situation, every part of the situation can be circumscribed within the one of the states, and the original multiple is counted as one in its totality.

In this manner, the extensiveness of the multiple and the existence of the one are knit into a single coherent process, and mathematics affords philosophy further possibilities at the very edge of thought. Because the void defines a multiplicity without restriction, the world as the one presented in the situation, likewise unfolds an infinity of possibilities. Mathematics and philosophy thus enter into intimate alliance, and a new vitality is awakened within philosophy. Such an alliance is groundbreaking in its force, both for mathematics and for philosophy. For the mathematician, the authenticity of mathematics has already been settled, and the traces of the true are to be found in the investigation of new theorems. If truth were to subsist within mathematics alone, the mathematician would already be the consummate philosopher; their indifference to all other matters would render the attainment of truth all the more accessible. The philosopher, by contrast, must remain perpetually within the excess of cognition, for the void does not surface from any extant philosophical discourse. Badiou therefore proclaims that the meta-ontology he affirms is neither the calculative domain of the mathematician nor the discursive domain of the philosopher, but rather a historical conjunction emerging from the interrelation of these two reflective practices. Every object is reducible to a pure multiple, itself founded upon the non-presentation of the empty set; that current is set theory.

### 1.2 *The generic in truth*

The rigorous logicity of set theory demonstrates that the set is in itself a consummate situation; the existence of the void testifies to its non-completeness and by the same token to the indeterminacy of the set itself. How is the interstice between presentation and representation to be filled? Badiou locates the solution in the axiom of choice. The axiom of choice states that for every set  $S$ , there exists a function from which for each non-empty subset  $A$  of  $S$ , a unique element  $f(A)$  satisfying  $f$  may be chosen. This indicates that within the interstices of a set, a procedure of separation operates that confers names upon those non-beings. Yet this procedure, as a forceful intervention, cannot itself preserve the eternal truth of the meta-structure, and it likewise attests to the existence of an excess relative to the one. Whether such excess will be subsumed by representation, however, remains indeterminate; we can never foreknow how this intervening procedure will unfold. Like Mallarmé's cast of dice, its occurrence may issue in a manifold of differing outcomes.

The two modes of counting—presentation and representation—render the fissure between situation and state of the situation mutable. Badiou accordingly distinguishes three classes of terms, corresponding to distinct cases. Normal terms are those that may be both presented and represented, conforming fully to both rules of the count. Singular terms are those presented in the first count yet not represented in the second; such multiples, subsisting solely within the meta-structure, cannot inhabit any subset and therefore figure as terms peculiar to the situation. The most distinctive class consists of terms that do not appear in the meta-structure and do not belong to the situation, but are merely included within it and exhibited by the state of the situation; these are termed excrescent terms. Should every term of a situation be a normal term, both presented and represented, which the situation would be what Heidegger calls the genuine self-showing of nature, and Badiou names it a natural situation. Conversely, should anomalous terms emerge within a situation, terms only presented or only represented—the situation is termed historical. When a term within a situation cannot subsist within any of its subsets and figures solely as presentation, certain of the multiples composing it do not belong to the situation; the historical situation thus carries within itself the singularity of multiples not yet brought to manifestation. As for representation, it is itself the multiple yielded by the first count and is forcibly named only at the second. Within this instability of the multiple, there subsists within the situation something the meta-structure cannot grasp, an ungraspable site, which Badiou designates the evental site. He writes: *one can 'choose' an element from each of the multiples which make up a multiple, and one can 'gather together' these chosen elements: the multiple obtained in such a manner is consistent, which is to say it exists* (Note 9).

The event, with respect to a given situation, constitutes an exception: an indeterminable element exceeding the extension of what belongs to the situation, akin to the forceful procedure of intervention noted above. For the event opens up a perspective ungraspable within the set of the situation, generating a rupture within the interstices of intersection. Badiou therefore holds that the event resides at the edge of the void or within the foundational multiple. On the one hand, since beneath the void no

term can be counted as one, the event can only be conceived as a site within the void, a minimal unit. Thus, although the evental site subsists within the situation, the multiples composing it cannot belong to that situation. When the multiple constituted by the evental site is presented, the multiples beneath its multiple verge upon the void, and the evental site continually extends outward, escaping the meta-structure. On the other hand, if the event were to enter into the coherence of the multiple, it would be unified within the meta-structure. If the original situation is termed the one, then the event is precisely what blocks the infinite regress of the meta-structure back toward the one. Because the event is itself the foundational point of the situation, and because its existence interrupts the genealogical regress of the set, the event is not a part of the original one, but rather a one that exceeds the primordial one. Badiou offers the example of an apple, grass, and dried mud. These are elements wholly unrelated within a given situation, incapable of being presented therein as a single signifying term. So, if an event of water being splashed occurs, a fissure opens within the original situation; this novel event of splashing causes the three to compose the set of ‘what has been wetted’, and they thereby come to be represented within the set.

Badiou designates the historical situation as  $S$ , the evental site as  $X$ , and the event as  $e_x$ . The event is composed of the elements of its own site together with itself, that is,  $e_x = \{x \in X, e_x\}$ . This signifies that the event, as one is at once the multiple that belongs to the evental site and itself. Although  $X$  belongs to  $S$ , its elements cannot belong to  $S$ . The emergence of the evental site informs us that, although a historical situation contains a site, the event is not perpetually presented therein. Moreover, owing to the coherence exhibited by the situation, we can pursue the traces of the event only within representation. The event cannot be apprehended within an unrepresented situation; it is touched only retroactively, after representation has occurred. Yet the event subsists within the evental site, conferring indeterminacy upon the future of the situation. In the case of the French Revolution, this event encompassed elections, the guillotine, and persons of differing classes and identities; together, they composed a set, with revolution as the central term. Once this event ruptured the old situation and constituted a new one, the consciousness of the age, through the intervention of the subject, came to be represented as a signifier intelligible to humanity. Within capitalist society, the proletariat figures as an evental site: the proletariat is initially a latent event within society, presented yet not represented, incapable of being named by the prevailing situation. With the publication of *The Communist Manifesto*, however, the proletariat ascended to the historical stage and brought its existence to representation within the meta-structure of the bourgeoisie. Had the theory of proletarian revolution not been articulated, would the proletariat have manifested its formidable power? For capitalist society at that juncture, this remained indeterminate, but retracing the path of their struggle, we come to grasp the proletariat’s prodigious subversive force.

This process requires a subject to confer a name upon the event; it is the subject’s agency that enables the event to be discerned, and it is here that the truth procedure becomes operative. Within this process, the conditions for truth’s coming-to-presence are produced: the event opens a fissure within the

situation, and the subject pursues the traces of truth within that fissure. Badiou writes: *that the miracle—like Mallarmé's chance—is the emblem of the pure event as resource of truth. Its function—to be in excess of proof—pinpoints and factualizes the ground from which there originates both the possibility of believing in truth* (Note 10). Truth is not absolutely present, within a situation, truth descends amid the anomalous multiple. As a set presented as one, the situation's capacity to represent truth is determined by the event it harbors; this indeterminacy ensures that truth no longer figures, as it did in earlier philosophy, as an unconditional being, but rather as a representation constrained by various structuring procedures.

We have already seen the cardinal role played by the axiom of choice. It informs us that, in the wake of an event, the subject is able—through some mechanism to separate out the multiples bound up with the event, thereby obtaining a set of multiples; this is the subject's procedure of inquiry. Once an event has occurred, inquiry enables judgment to be passed upon these newly presented multiples. By circumventing the meta-structure of the situation, the subject acquires a set of novel structure, whose intersection with the original situation is  $\emptyset$ , and whose multiples are exhibited as a coherent unity displaying genericity—what Badiou terms the generic procedure. Drawing upon the power-set axiom and the axiom of extensionality, we may through unending affirmation of the generic procedure, conjoin human finitude with the infinitude of truth and so seek out that infinite generic set. With respect to the infinite situation, the subject's role is precisely to be the agent of the second count: through the subject's naming of non-being and the unceasing extension of the generic set, the eternal yet ever-wandering truth lodged within the fissure of the situation is sought out. For the subject, the subject is the point at which the rules of nomination and of fidelity intersect. What the subject is able to perform is fidelity—that is, through the subject's force, events that elude the operation of the count are made to attain a determinable existence. The existence of the faithful subject enables the original situation to be broken, while at the same time, through the subject's act of naming, a new set is established. For philosophy, the genesis of philosophy unfolds along a vertical historical axis, while the names of those points of constancy that traverse it horizontally are precisely the truths. The procedure of naming such points falls to faithful subjects, who, in a certain sense, are those philosophers who have caught sight of the traces of truth's existence.

If truth is to descend amid the infinite multiple, then truth too must be a set composed of multiples. Badiou writes: Truth can only be a singular production of multiplicity (Note 11). He maintains that the essence of truth is immanent: truth is not a being subsisting independently of the situation but a part internal to it, dependent upon the situation's unfolding and upon the subject's participation. This entails that truth is not an abstract, objectively subsistent external entity, but is forced into a concrete situation through the subject's engagement and action. Yet for Badiou, the immanence of truth does not signify its determinacy within the situation; on the contrary, it manifests truth's undecidability. Truth is not a fact or datum that can be adjudicated by external criteria; it must be progressively disclosed through the subject's faithful operation upon the event. The advent of truth, that is, depends upon the subject's

recognition, intervention, and action, and this process does not conform to pre-established external standards. The immanence of truth is therefore intimately bound up with its undecidability, and the two together ensure that the unfolding of truth is a process replete with indeterminacy and openness.

Because the generic multiple of truth incorporates those elements that the existing framework of knowledge cannot subsume under any category and that the meta-situation cannot name, it follows that the content of truth cannot be exhaustively described through any classificatory system. This unnameable dimension of truth does not mean that truth cannot be disclosed or understood; rather, in the course of truth's unfolding, certain elements will invariably elude expression by the prevailing language and knowledge system. Since truth is fleeting, the situation comes to be dominated by the encyclopedia of the situation (*encyclopédie d'une situation*), which deviates from truth and effaces its existence, congealing into a sham world of mere appearance. During the Second World War, for instance, traces of truth once existed within Germany, yet the novel situation engendered by political forces obliterated those traces and once again rendered truth a specter haunting the latent fissures between event and situation. Within the interstices of subsequent development, however, as with the formation of the Anti-Fascist Alliance, the generic once more in the wake of an event, drew new elements from the fissures of the situation, returning truth to representation. Event and situation, within the fissure between inclusion and non-inclusion reconstitute the set of truth.

The subject, for its part, is the bearer that sustains the generic procedure of truth, and it does not abide by the operative rules of the situation. The subject is not a constant presented within the situation but a scarce existence that, possessed of a singular force, carries out the generic procedure in transcendence of the situation. It is the manifestation of the situation's excess, the concrete state of the procedure, a perpetually emergent creator and revolutionary. The event is the inception of the subject's intervention, and intervention is at once a complex operative process and the process of subjectivation itself. The subject intervenes in the situation in the form of a two-set (*deux*), forcefully drawing the excrescent name into the rule of the situation. By means of a singular count, through the selection of elements faithful to the event—the subject incorporates them into a proper name designated truth; or conducts them into a non-signifying set without referent, the proper name of the empty set. The subject enables the supernumerary one, extracted from the meta-situation, to become the trace of truth's advent, and so renders the event a truth. The event conversely affords the subject its opportunity: through encounter with the event and through inquiry, the subject is able to assess which terms are proper to truth, selecting them within this contingent encounter.

In the pursuit of truth, the individual is initially passive: knowledge retains its regulative force within the encyclopedic set, and the individual's actions and choices remain bound by the rules of the situation. But when an event occurs, the individual through intervention actively chooses fidelity to the event and is thereby transformed into a subject. Intervention is at once the subject's action and the very process by which the subject is generated. Through intervention, the subject becomes the bearer and propellant of truth. In remaining faithful to the event, the subject drives forward the unfolding of the truth

procedure while continually shaping and reconstituting itself within that very process. Through intervention by impelling the event's deployment, the subject reconstitutes the rules and structure internal to the situation. By way of fidelity to the event, the subject extends and deepens the event's meaning within the situation, thereby transforming what had been a closed situation. This is at the same time a process of choice: the occurrence of an event does not of itself naturally constitute the inception of a truth procedure; the subject must actively elect to recognize it as the origin of a truth. Badiou terms this election a kind of wager or gamble, for the truthfulness of the event cannot be adjudicated from within the situation, and the subject must decide whether to intervene in the absence of any decisive evidence.

The domain over which the procedure of fidelity operates consists in the naming of the unnameable within the situation and the recomposition of the terms thereof. Yet truth is infinite, while the subject who discerns truth is finite. The subject cannot recognize the truth encountered within the situation directly; only after truth has left its traces can recognition occur. The subject can only trust that it is able to know truth, and must save itself by means of belief alone. Through recognition, the subject is able to disclose an approximate truth and affirm such elements as terms belonging to truth. By naming the recomposed terms within the situation and rendering them intelligible to knowledge, the subject brings to manifestation a portion of what cannot be discerned. This belief takes shape in the form of veridical knowledge, and the subject's naming of the event constitutes the matrix of the procedure of fidelity. As Badiou observes: Language is the being of truth in that it conjoins the finite inquiries of the present moment with the infinity of the generic that will come. Such words and phrases are excessive with respect to the meta-situation, yet they are precisely the possibility of truth's 'yet-to-come' within that meta-situation. Once the event reconstitutes the meta-situation, such locutions are exhibited as the truth that the meta-situation harbors within itself. Hence, in the eyes of bystanders, the intimate language between lovers may seem mere childish jest, just as science in the feudal era was deemed a meaningless abstraction. In producing such names, the subject can only believe that they pertain to the truth about to descend, securing thereby a hypothesis approximate to truth.

The concept of forcing (*forçage*) derives from the Gödel–Cohen model in set theory and is reconfigured, philosophically, as the active practical process of the subject. It demands that, at the rupture opened by the event, the subject—through faithful nomination and operation—convert the undecidable truth from potentiality into actuality. *Badiou writes: forcing is a relation verifiable by knowledge, since it bears on a term of the situation* (Note 12). By way of nomination, the subject is at once the bearer of the generic procedure and the hypothesis of an outcome of the new situation that has not yet come to pass. The relation of forcing operates in the interplay between knowledge and the terms of the situation, thereby disclosing how, from a finite situation, one may conjecture and verify whether a given statement conforms to truth. The subject always moves within the linguistic system of the situation; only by enunciating some nomination or definition can it apprehend the existence of an event. Yet such enunciation does not directly reflect reality; it remains restricted to the indiscernible within the

situation. In other words, the subject-language's enunciation always points toward some future situation, one containing the indiscernible portion of truth; only when that portion has been disclosed can the linguistic enunciation become veracious (*véridicité*). Within set theory, forcing constructs, by means of a set of conditions, a generic set that progressively transcends the constraints of the original model. Badiou mathematizes this process: the subject, both within the event and in its aftermath, identifies the relevant elements, as with the proletarian movement of the Paris Commune and its impact upon bourgeois society. Through the procedure of fidelity, the subject then selects those conditions compatible with truth, gradually incorporating the scattered fragments of truth into the situation. When the density of the set of conditions attains a level that may be deemed generic, truth, as an unnameable existence, coming to manifestation within the situation: the subject that is forces truth into the situation.

### *1.3 The Existential Pathway of Truth*

If truth is to descend amid the infinite multiple, then truth too must be a set composed of multiples. Badiou holds that truth can only be a singular production of multiplicity. He further writes: *What is striking about all these configurations is the way in which they end up mobilizing against philosophy the entire range of types of truth: love, desire, and drives in the psychoanalytic tradition, politics in the case of the Marxist tradition, science in that of the analytic, and art in that of Nietzsche* (Note 13). From this vantage, philosophy may be regarded as a functional relation. The axiom of separation indicates that, by means of a function  $f(x)$  serving as a mechanism of selection, only those  $x$  that conform to the operative rule of the function may be selected to compose a new set. The selective mechanism of philosophy thus takes all events as its domain of definition; events pertaining to the four philosophical presuppositions noted above figure as elements of the new set  $M$ , and within a given situation, a selective procedure is enacted whereby events are finally returned to the embrace of truth. The current task of philosophy is to liberate itself from the decisive sway of any one truth procedure—to dispel the dominance of a single procedure and so rekindle the vitality of reason.

The situation is the set in which the traces of truth's prior subsistence are presented. Since truth is fleeting, the situation comes to be dominated by some particular generic procedure, eventually deviating from truth and effacing its existence, congealing into a sham world of mere appearance. During the Second World War, traces of truth once subsisted within Germany, only to be obliterated by the new situation formed from the traces of a political truth procedure, leaving truth once more a specter haunting the latent fissures between event and situation. Yet within the interstices of subsequent development—as with the formation of the Anti-Fascist Alliance—the generic procedure once again, in the wake of an event, drew new elements from the fissures of the situation and brought truth back into manifestation. Event and situation, within the fissure between inclusion and non-inclusion, reconstitute the set of truth. In what precedes, we have located the existence of the event solely within mathematical ontology; how is this ontological self-consistency to be sustained as it passes into the phenomenal world? Badiou advances a phenomenological account of truth's existential process within the existing world, thereby furnishing truth with a bearer in actuality.

In *Logics of Worlds*, Badiou applies the ontology of number to the phenomenal world by way of the linkages of second-order logic. As noted above, what a situation presents is heterogeneous multiplicity, which can be counted-as-one only under the operation of structure, a process that admits of explanation within the actual world as well. Badiou cites the example of plane trees planted along a roadside. Two such trees standing at the roadside differ markedly in the density of their foliage and in the thickness of their trunks. Yet for a driver passing by chance along this road, who traverses it at speed, the difference between the two trees scarcely registers, since to him they are simply two ordinary trees. If we place the two trees within the set of plane trees, they are designated within the set as plane trees *a* and *b*. For any given set, any two elements *a* and *b* compose a coordinate (*a*, *b*); under the operation of a certain structural function, *a* and *b* attain homogeneity and thereby manifest as identity—namely, the plane tree. This point, Badiou terms the envelope or order-point. According to Badiou's definition, an order-point is a point at which two points are taken as the same. We thus obtain a functional relation:  $f(a, b) = p$ , *p* is not invariant: if someone reclining beneath the trees happens to glance upward, the two trees will appear in plainly disparate guise. The valuation of point *p* therefore depends upon a function  $f(p)$  expressing the relation of identity. This  $f(p)$  is precisely what enacts the process of presentation from the multiple to the one, and Badiou names it the existential function. As a function,  $f(p)$  possesses a range of values bounded by a maximum and a minimum. For the driver, *a* and *b* are wholly identical: here,  $f(p)$  attains its maximum value, and they are simply plane trees. For the person beneath the trees, *a* and *b* are wholly distinct, the curve off (*a*, *b*) trends toward the origin of the axis, and  $f(p)$  assumes its minimum value. Although the coordinate (*a*, *b*) exists, it cannot be exhibited within this set, that is,  $f(a, b) = 0$ : (*a*, *b*) is non-being. Badiou writes: *but neither do we undertake a sublation of the One of the two beings; we do not exhibit anything as 'One and the same thing'. It might turn out that in a given world, two beings will appear as absolutely unequal. There can be Two-without-One (as we have established elsewhere, this is the great problem of amorous truths)* (Note 14).

Pursuing this function further, we may observe that all elements within a given set may compose a manifold of coordinates (*a*, *b*), whose mutual relations are expressible through the function  $f(p)$  of the order-point *p*. Should  $f(p)$  attain its maximum value for the relations of identity among all elements, then the order-point *p* is the transcendental point of the set. By virtue of this transcendental point, all elements within the set come to participate in this relation of identity, forming a structure under which every element manifests as one. In this way, the set acquires a determinate structure, the structure constituted by the transcendental point, and the transcendental point, in turn, expresses itself through this structure and so attains presentation. At this juncture, the plane tree is named plane tree by the driver, and the transcendental point thereby attains existence. As Badiou writes: The world thus subsists within various possible compositions of the multiple (Note 15). The differing valuations of the transcendental point under different structures yield different appearances of existence within the world. Existence thereby descends from the categories of mathematical presentation into the categories of phenomenal appearance, and mathematical meta-ontological analysis becomes phenomenological

characterization. Should the transcendental point take the value 0, that is, should there be no element bearing the relation of identity, it cannot enter into presence in this world, cannot present itself through structure, and cannot, accordingly, be brought to appearance therein. Since the transcendental point at this juncture subsists yet cannot be presented, Badiou, within mathematical ontology, situates it at the edge of the void; within the actual world, it is termed non-being, or equivalently, existence in another world.

Such is the force of the event: it confers further indeterminacy upon the world's development. Even when the traces of truth's existence have vanished from actuality, a new event can yet enable truth to find a new body within the fissures of the situation. The world, contrary to what Althusser would have it, is not enveloped in an ideology from which there is no escape; the possibility of fresh vitality persists. Badiou is a communist, and a Maoist, precisely because he believes in a world of individual emancipation and pluralistic coexistence. Mao's dictum that a single spark can start a prairie fire expresses this conviction, as does Marx's notion of an association of free individuals: humanity will, in the end, accomplish the leap into the realm of freedom. The event, however, always subsists within the historical situation, that is, within the actual world. The event is able to breach the extension of the situation and so attain a new presentation. Non-being is not a perpetual absence from presence but awaits some indeterminate event whereby it may breach the structure of the old set and accede to presentation. The event enables what could not previously be brought to appearance within the structure to appear within the world, and at the same time gives rise to a new situation. As Badiou puts it: *tipping-over of a nil intensity of existence into a maximal intensity, characterizes real change. Among the numerous consequences of a jolt affecting an object of the world, such a sublation is in effect the signature of what we will call an event* (Note 16).

The world is not a stable structure; sparks of contestation subsist within it. The event can be named only after existence has occurred, and Badiou terms the trace left in the wake of an event the primordial statement. He maintains that the primordial statement, as the trace bequeathed by the event, itself fashions a new flesh for truth. That is to say, the spark struck within the event from the encounter between world and truth is at last reduced to ashes, and these ashes are the primordial statement: the primordial statement attests to truth's having-been. Today, however, this trace must be retrieved through a new mode, and that mode is subjectivation. Assuming that, for the subject, the true subsists only in an instant, the subject can re-present truth solely through the traces of the primordial statement. As individuals within the subject possess agency and varying inclinations of choice, divergent stances toward the primordial statement may also arise. The faithful stance is fidelity to the trace bequeathed by the event—fidelity, that is, founded on the conviction that the event has indeed taken place. For the faithful subject, then, the task is to find, by way of some path within the present circumstances of the world, the route by which truth may be restored: to re-present, in other words, the truth that flashed forth and vanished within the event.

Through this faithful process of subjectivation, truth comes to find a body within the world—truth’s embodiment. What the subject must do is, in accordance with the traces of the event, to reshape a body of truth, that is, a subjectivized body. The more this subjective body remains faithful to the primordial statement, the more fully it becomes a part of the process of truth. Idea, as the binding agent between subjectivation and the individual, bears the process whereby the individual becomes part of a faithful subjectivation. Only thereby can the individual’s drift toward other modes of subjectivation be curtailed, and only thus can truth, through the subjectivized body fashioned by the individual, attain appearance within the world. Philosophy is precisely such an idea: through the construction of subjects, through the pursuit and synthesis of primordial statements, it brings new events to manifestation within the fissures, transforms the entrenched situations of the existing order, and forges a new body for truth, thereby tracking the advent of an eternal truth.

## 2. Conclusion

Badiou is widely regarded as a post-Marxist thinker. He has reinterpreted and reaffirmed the reliability of materialism—the cornerstone of Marxism—by articulating a new materialism by which to render the world intelligible. At a juncture when philosophy is gradually losing its metaphysical tradition, the discipline must bear responsibility not only for humanity’s cognition of the existing world but also for human reason itself. Badiou takes mathematics as the genuine metaphysical foundation, freed from the fetters of history and morality, and on this basis has constructed an integral logic of mathematical ontology, thereby completing his philosophical universe of interpreting and transforming the world. Philosophy, having sunk into the mire of the post-truth era, has been revitalized within the deductive logic of mathematics; in an age in which nihilism prevails, the force of materialism has been brought once more to manifestation. At a moment when the subject has been deconstructed, Badiou has reconstructed the role and status of the subject, retaining his conviction that the subject is capable of bearing the tasks of revolution and reform.

For philosophy itself, Badiou observes that the philosophical world following the Second World War has been suffused with reflections occasioned by humanity’s irrational mutual destruction. Philosophy has been taken as the very crystallization of reason, yet it cannot command the irrational conduct of human beings. Philosophy, however, was never a determining authority but rather a series of distinct points along humanity’s exploration of the world’s development. Philosophy is not absolute truth in itself, but solicitude for truth. It must return to reason, return to reflection on metaphysical questions. Its function is to furnish a kind of set or framework within which the contours of the world may be exhibited and the infinite possibilities of the “multiple” may unfold. Philosophy posits itself, and the objectivized world it confronts, in mathematical form, and from the formative process of the rational procedure that pursues the true, it inquires into how the traces of truth may be discerned within the multiple and how truth’s existence may be brought once more to manifestation within this-being.

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## Notes

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- Note 12. Badiou, Alain. Being and event. A&C Black, 2007.p402.
- Note 13. Badiou, Alain. Second manifesto for philosophy. Polity, 2011.p66.
- Note 14. Badiou, Alain. Logics of worlds: Being and event II. Bloomsbury Publishing.2019.p149.
- Note 15. Badiou, Alain. Being and event. A&C Black, 2007.p316.
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