

Alexander R. Galloway
**21 Paragraphs
on Badiou**

01/06

e-flux journal #89 — march 2018 [Alexander R. Galloway](#)
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Following in the spirit of book reviews written about books that do not exist, I offer here – no doubt at my own peril – a series of observations in anticipation of Alain Badiou’s forthcoming *Being and Event 3: The Immanence of Truths*, a book that does not yet exist but will exist at some point in the future.

1. Alain Badiou has been interested in poetry and literature throughout his long career. Yet in recent years he seems to be turning more closely to poetry. Such a turn presents something of a problem for Badiou, a Platonist, given Plato’s skepticism toward poetry and concomitant preference for mathematics. But what is poetry? And what is math? For Badiou poetry is a marker for the event, for life, for the real, for what Jacques Lacan called “the impossible.” By contrast, mathematics is the space of the precise letter, of argument, of proof, of learning and training (after the original Greek meaning of *mathēsis*), of formal abstraction in its most rigorous articulation. Already notorious for his defense of mathematics as ontology, Badiou has become a bit more evenhanded on the question of the matheme versus the poem, preferring instead to describe philosophy as poised “between” poetry and mathematics, not simply privileging the latter.

2. In its essence, poetry is an attempt to touch the real continuum of life. And, as Badiou argues, there is no poem that does not in some basic way describe an event. While at the same time mathematics is an attempt to abstract away from the real continuum into the realm of consistency, name, rule, and identity. Still, the contrast is perhaps overstated. Poetry is impossible to define in its totality without reference to rule and rhythm, figuration and abstraction. Likewise mathematics spans both domains. There has existed since the ancients a mathematics of the real continuum as well as a mathematics of the proper name and rule. The former is a mathematics of pure difference while the latter a mathematics of pure identity; the former a math of time – indeed directly *in* time – while the latter formalizes time to a sufficient degree as to be able to purge it entirely, replacing time with space.

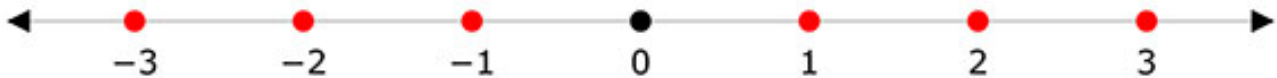
3. “Geometry” is the name given to the mathematics of real difference. Geometry deals directly with the pure continuum of the world, and thus appears most commonly as continuity in line or curve. Geometry trades in magnitudes and proportions, figures and shapes. Geometry produces *images* and constitutes a kind of *image-thinking*. At the same time, geometry suspends the number and thus puts abstraction into question (as negative or subtractive abstraction). The contemporary name for geometry is “analogicity.”

Natural, \mathbb{N}

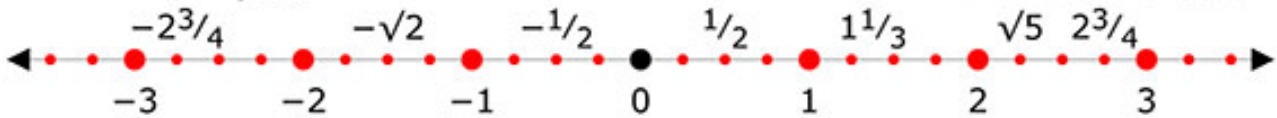
Start with the counting numbers (zero may be included).

**Integer, \mathbb{Z}**

Extend the line backward to include the negatives.

**Rational, \mathbb{Q}**

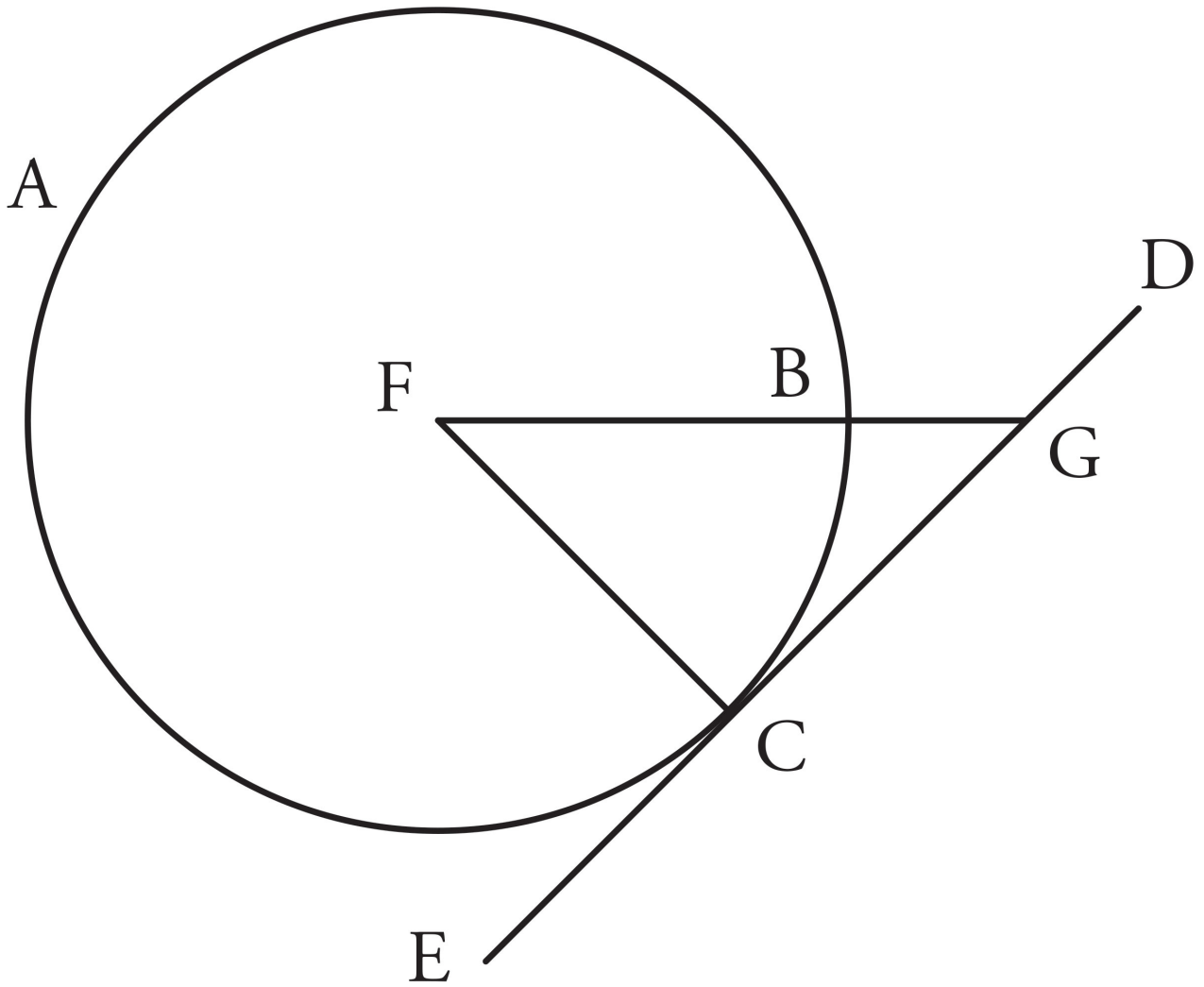
Insert all the fractions. Insert all the roots.

**Real, \mathbb{R}**

Fill in all the numbers to make a continuous line.



This illustration depicts a geometrical representation of natural, integer, rational, and real numbers.



On the perpendicularity of the tangent line (based on Euclid, *Elements*, Book 3, Proposition 18).

4. “Arithmetic” is the name given to the mathematics of simple identity. Arithmetic starts with numbers and counting, and thus relies on a fundamental individuation of entities under some rule of identity. Arithmetic proceeds under the sign of the letter and thus tends toward a kind of *text-thinking* aiming at the production of texts. Arithmetic transcends the real continuum and thus constitutes both the act and living body of abstraction (i.e., positive or additive abstraction). A common synonym for arithmetic today is “digitality.”

5. There are many mixtures of geometry and arithmetic. Some of the most interesting mathematical developments have come from the digitization of geometry, or indeed the rendering of arithmetic through pure continuity. And, further, geometry and arithmetic, when they appear, both tend to appear together. At the point where geometry seems most prevalent, one will surely find arithmetic artifacts. Likewise the most highly evolved arithmetic will tend to invert into pure geometry.

6. Historically speaking, geometry is the first mode of mathematics, arithmetic the second. Yet that belies the basic bias of geometry: to prioritize time, and hence to have prioritized itself. Indeed, considered from the perspective of structure, arithmetic is the first mode of mathematics (with geometry now relegated to second), given how difference may only spring from a prior identity. Which story to believe, genesis or structure? The answer will reveal much about who is speaking.

7. One may map poetry and mathematics onto these two domains. Poetry comes to signify the continuum, the analogical branches of mathematics (like calculus or topology), what number theorists call the real number system, and hence comes to signify geometry in the old Greek sense outlined here. By contrast, mathematics comes to signify, in fact, a *subset* of mathematics: numerical discretization, the integers and digits (and the digital branches of mathematics), what number theorists call the rational number system – that is, it comes to signify arithmetic in the classical sense.

8. In other words, there seems to be a mathematics of the poetic real (the second or real infinity of Georg Cantor, the indiscernible of Paul Cohen) just as much as there is a mathematics that is more, as it were, faithfully mathematical (Cantor’s first or natural infinity, Kurt Gödel and the concept of the constructible set, but also in a way set theory overall with its affection for counting and the “count-as-one”). The mathematics of the poetic real gestures outward from discrete number to continuous curve. The rest is a more directly math-oriented mathematics that focuses on the strict lucidity

and utility of circumscribable blocks, the integers.

9. Recall the fabled inscription at Plato’s Academy: “Let no one ignorant of geometry enter here.” But for Badiou it has always been *arithmetic*, not geometry – that is: the number, the count, the theory of points. Recall how Brian Massumi once wrote an essay in homage to Gilles Deleuze called “On the Superiority of the Analogue.” For Badiou it would have to be the reverse, as each of his many treatises secretly bear the hidden subtitle “On the Superiority of the Digital,” the digital defined as arithmetic and discrete number.

10. Badiou is a digital thinker in an age dominated by analog philosophy. Let me explain. Labeling him a “digital thinker” is not to suggest that Badiou has written about computers (he hasn’t), nor that he is somehow allied with the school known as Digital Philosophy (he isn’t). The moniker is also not meant as a backhanded insult – formal similarities between set theory and info-capitalism notwithstanding. Rather it is meant as a characterization of a general tendency of thinking.

11. Which is one way of interpreting Badiou’s fidelity to Maoism. The Maoist interpretation of the dialectic favored the moment of analysis, when the one divides into two. And the moment of analysis (1→2) is nothing else than the moment of the digital, of the integers, of arithmetic as a whole. (And indeed many of the mathematical fields that come under the heading “analysis” reveal their fundamentally anti-real bias by rendering pure continuity via digital techniques such as the differential, the cut, or the singularity point.)

12. Yet while Badiou is an arithmetical and digital thinker first and foremost – not a geometrical thinker like Deleuze – mere number has never been Badiou’s ultimate desire. The *Being and Event* trilogy is organized around a fundamental choice: either a predictable, rational, constructible universe, or an indiscernible universe of the generic real. Either the state or the event. And sometimes the choice finds two specific avatars: Gödel or Cohen? Constructible or generic? Badiou’s answer is emphatic: *I choose Cohen*.

13. Plato’s matheme may have interrupted the old Homeric poem. But in the twentieth century, the *generic* seems to have interrupted the old matheme, leading to a new kind of pseudo-poetry of the indiscernible real. What makes Badiou so interesting, and what differentiates him from the more romantic partisans of the real, is that Badiou arrives there strictly within mathematics. He never “cheats” by exiting mathematics. Discovering the real in the Vale of Chamouni is a feat of poetic mastery.

But Badiou discovers it within pure number.

14. How to interpret Badiou's current interest in poetry and the absolute? Or – if we may be so presumptuous as to speculate about a book not yet published – what can be anticipated in *Being and Event 3: The Immanence of Truths*? Badiou seems to be cultivating a strange new vocabulary. I do not mean terms like “infinity” or the “absolute” – admittedly alienating to me, a Marxist – but “immanence,” as in the “immanence of truths.” If in the past Badiou was faithful to the Chinese Marxist tradition, he now appears more Russian, favoring the moment of *synthesis*, the operation of “the two integrating as one” ($2 \rightarrow 1$), a fitting definition of real analogicity.

15. Immanence has a special lineage of course, as in the traditions of Spinoza and Deleuze, or in a different way with Michel Henry and François Laruelle. And the Hegelians will also claim the term, albeit in a manner nearly unrecognizable to me. So why immanence? We know that immanence is a way for philosophers to think of a generic identity (not an abstract one), an “indiscernible” real (not a symbolic one). It is no different for Badiou, and in this new volume he will finally address generic identity directly. However, Badiou still breaks with the poetic tradition, which claims that the real can only be addressed through *finitude*. Looking beyond what he calls the “pathos of finitude,” *Being and Event 3* is devoted to the concept of *infinity*, continuing on from the long sections in part three of the first volume of *Being and Event*. So while other thinkers might arrive at the generic through finitude, Badiou does the reverse by approaching the generic through infinity.

16. Curiously, the two kinds of math, when defined separately and rigorously, furnish something rather odd, nothing less than a definition of mathematics as such. For if *mathēsis* is the cultivation of abstraction, and if abstraction is defined as the gap between the real and the rational – literally between the real numbers and the rational numbers – then mathematics itself is nothing more than a spanning of that gap. To understand the continuum and to understand how *logos* departs from the continuum is to enter mathematics. In other words, Badiou's story is not just a story about two *kinds* of mathematics (a cataloging of types); his story also provides a *definition* of mathematics itself through the identification of a formal relation: mathematics means understanding the difference between the real and the rational. And thus, through similar logic, mathematics means understanding the difference between math and poetry. This is not simply to endorse the banality that “math is different from poetry” or that “poetry is different

from math,” a difference accentuated all too frequently by Romantic poets and positivistic scientists alike. Rather, the stress ought to fall on the difference itself: whatever gap there might be between poetry and mathematics, such an epistemological gap is mathematics as such. Here one might christen a kind of Badiou's Principle: mathematics is defined as the difference between the real numbers and the rational numbers.

17. Badiou's forthcoming volume is also explicitly about *works*. Yes, Badiou will be talking about poets and poetic works, but he has always done that. Consider rather the final two sections of the projected volume devoted to works both as objects and as sites of becoming. In other words, *Being and Event 3* will address the “immanence of truths” not simply in subjects, or worlds, but in *works*. And so while Badiou describes the trilogy in terms of a progression from universal, to particular, to absolute, one might also conceive a parallel progression from subject, to world, to work (and perhaps also beyond toward the real).

18. Through all of this Badiou has become less *polemical* against his former antagonists, bringing them closer into a kind of intimate relation of thinking. Badiou seems to be bringing Deleuze closer for instance, addressing the real continuum directly, albeit only through the concept of large cardinals and transfinite numbers, not Deleuze's favorite themes such as affect, sensation, experience, intensity, or vitality.

19. Badiou seems to be bringing Martin Heidegger closer too, admitting the poetic site of the real into his system, albeit still rejecting Heidegger's poetic ontology in the strict sense. Badiou has begun to speak of an infinitude that is covered or concealed, and must therefore be revealed through a kind of unconcealing of truth.

20. And, surprisingly, Badiou seems to be bringing Laruelle closer, not just through the language of immanence, which Laruelle shares with Deleuze, but specifically through the concept of identity used to great effect by Laruelle. Indeed, Laruelle's definition of generic identity as “One-in-One” bears some similarity to Badiou's discussion of the absolute as “V in V” – V being mathematical shorthand for the absolute universe of the von Neumann hierarchy of sets.

21. So while Badiou should probably be characterized as an arithmetical thinker first and foremost, I suspect that with *Being and Event 3* he finally will have written his treatise on geometry. And he will then be able to utter with confidence: *Let no one ignorant of geometry enter here*. The arithmetical path and the geometrical path, while both beckoning in the first two volumes, will ultimately converge into a single enterprise in the third. A strict formalization of

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sublime infinity will provide a picture of the
immanent, generic real.

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