

Time, Mathematics, and the Fold

A Post-Heideggerian Itinerary

Said Mikki

E-mail: said.m.mikki@gmail.com

Abstract. A perspective is provided on how to move beyond postmodernism while struggling to do philosophy in the twenty-first century. The ontological structures of time, history, and mathematics are analyzed from the vantagepoint of the Heideggerian theory of nonspatial Fold.

1. Introduction: What is Time?

History of mathematics is the mathematics of history. History proceeds by quantum leaps, implying that continuity is an illusion. But what erupts is not the event of historical happening *per se* as much as it is the concrete enforcement of becoming-other so fundamental for constituting Mathematical Being as Transformational Being. To a large degree, Becoming and Metamorphoses are one and the same ontological Force, their shared wellspring exhausted by the Virtual, which is the ultimate force of the Cosmos. Everything is Nature, and Nature is to be found everywhere.

I don't know what time is, but time knows me. I run away from my Self, but the Self is the Other and the Other is the Horizon of Expectations giving rise to the Self (Heidegger), and hence one cannot consistently succeed in eliminating the Subject altogether. What remains to be done, then? Don't wage war on Idealism. *Ignore* Kant, but don't waste time arguing with him. There is no need to commit Heidegger's fatal mistake in *Being and Time*¹ by seemingly exhausting time through that lengthy onto-analyzing of Dasein and its various modes of "existential" and non-existential temporalities. What is desired in philosophy now is supreme mastery of the subject. How? By starting something totally new and different, an endeavoring to un-earth what has never seen the light of the philosophical day before, that which lies hidden in the depths of the World, dormant but profound, invisible but all-powerful and universal, an absolute essence, like Evil, Good, or Hope.

Time is the virtual becoming-other in metamorphosis, but since the virtual remains the cosmic force *par excellence*, this sets virtuality completely outside the parameters of representation and possibility. Time is this *im*-possible of the virtual, its inherent inability to be identical in the last instance, the constant evasion of the self in the other, embracing the other in the perpetually created self, and so on. For all of this, Mathematical Being is the *name*. It is the ultimate a-signifying signifier of beings when looked into through the prism of the Virtual; for without them (beings),

¹Heidegger [1].

the Virtual ceases to become the Global, annihilated consequently into the fragmentary multitude of events and event-flows.

It is in this very strange forbidden land lying between the global and the local that one encounters the Mathematical, manifested as Time in-itself. Time and the Mathematical. We study Nature in order to understand Time, but Time is the ultimate non-subjective understanding procured by the Self for the sake of destroying human knowledge and Subjective-Being. Unto the Unconscious, then. The afterlife is life without conscious self-awareness, a form of becoming that is one with pure Thinking clear and simple. Thinking and Being are not the same because Thinking is the Becoming of Being in metamorphosis, together with its concomitant enactment in multifarious loci and focal poles. And by the Mathematical I understand a process of nonhuman thinking isolated from figures and numbers and algebraic forms.

2. Mathematical Philosophy and Nonphilosophy

Where did French Philosophy err? In believing that the Mathematical is continuous with the natural, so they kept nursing mainstream mathematics and never managed to break away from representation,² never reaching as far as Russell, Heidegger, and Jung could go. Take the Mathematical as the un-representational residual nonessence of Nature's Form when there is no "mind" looking, when human thinking is out of sight, and when logic and grammar are completely overrun by schizophrenia and postmodern mathematics (mathematical philosophy.) Because I think of myself as one of those wandering free spirits unconnected to the Life of Form, unrelated to the Form of Life. History is Time. Time is History. The Mathematical is the motor of Time's enactment of nonpersonal essence, inauguration of nonhuman thinking, installation of primary nonessence. We don't run away from philosophy into nonphilosophy; instead, we embrace nonessence when searching for roots, origins, foundations, and all of that.

3. Mathematics and the Transcendental

History and Mathematics are deeply intertwined, though not mutually co-determinant in the last instant. They inform each other but also often collide and clash, creating lines of divergence and dissonance. Layer after layer, Time is built out of one univocal matrix of being-other, the perpetual striving of one being to transform into another being, and the group to metamorphose into a multiplicity of one-all. Metaphysically speaking, Time is 'the condition of the virtuality of Being,' replacing Kant's transcendental defined as 'the condition of the possibility of Being.'³ While Being remains the "same," its constitutive essence as the coming-into-together-ness in multiplicity is quite different when approached through Mind instead of Nature; the former route leads straight to Idealism, while the second is the one we hail as Abstract Materialism.

Let us learn how to un-learn Kant. The road starts from here: Against Transcendental Being we pursue Transformational Being. The subtlety of this tricky maneuver is to forget the dichotomy of Being and Becoming, reject all dualistic thinking, and instead fall back onto Heidegger's Horizontal Becoming-Other (Unconcealment, Clearing, Alethea, Falling, and so on.) How do we do that remains

²Bauiou [2].

³Kant [3].

to be seen, but soon we will begin enjoying the art of unlearning Kant, unlearning Idealism by destructing the Ego and banishing self-consciousness into the nothing of Night.

4. Resume of the Self

I don't see myself in Time. Time enacts my Self in its own nonessence. As a human being, I belong to the margin of History. Time is the substance of becoming, and so is History. There are no others in Time. Time is the final condition of other-hood. Thus you become a Self, by speaking with all the others, by nursing the strange and uncanny, by becoming art, becoming a book, becoming a muscle.

5. The Mathematical and the Fold

For us, the Mathematical is not a field of knowledge, but the *organizing field* of fundamental ontology taken hostage by nonhuman Thinking, which is nothing but the Process of Nature in its most rigorous incarnation outside man and biological being. Mathematical philosophy, within this perspective, becomes the science of history proper, strange as this may appear at first sight. We say that the Mathematical does not “know,” it is not a subjective essence and subjectification is not directly relevant here. It is a field of nonknowledge where the philosopher – who is not a Subject, but more of a Dasein, an overman, a machinic thinking process detached from the socio-political context of world history and local culture – aims at nothing but destroying the normal and familiar, starting with Idealism's darling, modern science or mathematical physics and Darwinism. The most difficult stage in thinking the Mathematical is to appreciate its elemental affinity for Nature at the same time while refusing to equate mathematical philosophy with any version of a “science of form,” starting with geometric figures and numbers and going through symbolic manipulations and computational orgies. Remember Proclus,⁴ but forget about his Neoplatonism, forerunner to Idealism. Think Heidegger but without the extravagance of Dasein's existential analytic, keep only the bare minimal nonessence of movedness, transformism, becoming-other. There is always something odd in erecting a mathematics without formal essence, but Form itself, as we discovered in fundamental ontology, is the flowedeness of fluid-being-in-becoming, the indefinite changeability of the stretching in and out of folded nothing, multiplied in intensity up to infinity. The spatial Fold⁵ is a bad metaphor, one that reminds us of the natural, steering the thinker away from Nature back into essence and representation. We need to begin considering a *nonspatial* Fold for ontology and natural philosophy, a dynamic reconfigurable structure almost unthinkable in ordinary terms. I prefer to speak of *a* Form that is nonessential, *a* fold that has nothing to do with hydrodynamics or geometric transformations, but more of a filling-up of nonspace through virtuality. The Virtual then is not only the cosmic force, the capital dynamic principle underlying nature, but also the *matter* of the world *per se*. The Fold is the Virtual as Form-Flow. The Event as Flow. Events are monads immersed in nonspace. And the major goal of mathematical philosophy is to analyze the structure of event-spaces, that is, space erected on nonspace via interactions among events and monads leading to the

⁴Proclus [4–8].

⁵Deleuze [9].

organized complexity of the concretized material One-All. Everything is essence, but the nothing is the most essential about this essence, which is the secret of the Fold as Nature's Nonessence.

Now what is nature if not this uninterrupted, incessant, almost schizophrenic evasion of essence? Idealism is the Later Heidegger's First Beginning,⁶ so it is no wonder that one cannot escape the tyranny of the despotic Signifier, the authoritarian State, the brutal Watchman: They are all inherent in the order of the Natural as such; in other words, you wouldn't have Nature without consciousness and ego and I-hood. Self-reflection all the same. The Fold, the last great invention of postmodern philosophy, is a failed attempt to go beyond representation. It failed because buried deep within the intricate traces of this univocal cosmic medium are the cancerous germs of self-reflection, Identity, and being-in-itself-and-for-itself. Reflection is mirrored in refolding, repetition, recurrence, resonance, all concepts that Deleuze and other French theorists have borrowed uncritically from modern science, re-exported them into their own novel systems of ideas. To go beyond the Fold, you need something like the Mathematical, which can better explain the ontology of a non-geometric manifold, a space of all spaces that has nothing to do with position or location. Neither lines nor planes. Nor solid angles nor extended bodies. Just pure nonpersonal thought, an ideation transcending Transcendence and invariant essences, a non-wavering embrace of the immanently different and uncommon. Deleuze was right about singularities,⁷ but he got their descriptions from *geometric* mathematics, that of the modern qualitative theory of differential equations invented by Lyapunov⁸ and Poincaré.⁹ We believe mathematical philosophy is the "science" of singularities *par excellence*. That remains the case, but ours is not an existing field of knowledge opened up by modern mathematics. Instead, *postmodern* mathematics is here called up to rescue workers and thinkers because the latter (the postmodern) is more of a "second beginning" than a continuation of a "great past" hailed as the Birth of Physics or Geometry (Serres,¹⁰ Deleuze,¹¹ Whitehead.¹²) Only Russell¹³ (inspired no doubt by Cantor¹⁴) appears to have realized that mathematics must be recreated anew, not merely modified in an incremental fashion. But he got entangled with logic and was misled by Idealist heroes like Einstein,¹⁵ Peano,¹⁶ Frege,¹⁷ Weyl,¹⁸ and others. Then Russell, too, was lost in the whirls of Time.

Create space. Or space *is* creation. The Fold never creates anything new. Folds *re*-shape what has already existed, repeat the Same (ontologically speaking), and proceed forward by re-molding what has been rather than inventing the future from nothing. But since the signature of Creation is precisely this *nothing-ness* of being when taken (by Reason) to its extreme limit, one may quickly understand the inevitable conflation of religions with Idealism, the fact that something like the Hegel

⁶Heidegger [10].

⁷Deleuze [11, 12].

⁸Lyapunov [13].

⁹Poincaré [14, 15].

¹⁰Serres [16, 17].

¹¹Deleuze [11, 12].

¹²Whitehead [18–20].

¹³Russell [21, 22].

¹⁴Cantor [23].

¹⁵Einstein [24].

¹⁶Peano [25].

¹⁷Frege [26, 27].

¹⁸Weyl [28, 29].

System¹⁹ was possible, and that the modern world is increasingly seen as a pure formal network of interlocking signifying chains reflecting, redirecting, and re-distributing essence everywhere.

The Fold is intimately related to *resonance*. To build, according to Fold ontologies, is to reconfigure what has been, meaning the objective is to wire, connect, attach, assemble, rather than producing being *ex nihilo*. Resonance becomes here the formal condition of possibility granting folded strata the legitimacy of worldly existence, initiating then a dialogue between mind (logic, grammar, semiotics) and natural objects, the foundation of representation and representational being. Although fold ontologies have been advanced for the capital goal of defying representation, they are still approached, contemplated, and designed within *modern* science, especially Darwinism, molecular biology, and mathematical physics, core fields of knowledge lying *within* Idealism. We are therefore naturally suspicious about folds, unable to fully trust them or to grant their processes full citizenship in the dominion of twenty-first century philosophy.

6. Conclusion: Beyond the Fold

There must be something more in the fold than folding back on itself, something like an onto-surplus value overflowing beings by flooding them with (onto-)nonsense held under the banner of the nothing. Folding back recalls reflection, reflection brings mirrors, and mirrors are the stuff out of which subjectivity, ego, consciousness are made. To fight representation you need a principle of “formative nonessence,” not only folded strata, for strata, whether folded or unfolded, are *already* regimes of material being that in turn need to be founded on their own. Fold ontologies have failed in providing sufficient principles explicating the constitution of the fold itself, a failure that can probably be traced back to the fact that Leibniz, Bergson, Deleuze, and Serres had to pay an exaggerated attention to modern science (Deleuze’s obsession with molecular biology, Serres’ with hydrodynamics, cybernetics, and thermodynamics.) While creating-by-refolding is a valid ontological formula, this still does *not* go far enough. Let us first attempt a more careful examination of this process from the *formal* perspective, which is the first task mathematical philosophy needs to achieve.

References

- [1] M. Heidegger, *Being and time*. New York: HarperPerennial/Modern Thought, 2008.
- [2] A. Badiou, *Being and event*. New York, NY: Bloomsbury Academic, 2013.
- [3] I. Kant, *Critique of pure reason*. Mineola, N.Y.: Dover Publications, 2003.
- [4] Proclus, *A commentary on the first book of Euclid’s Elements*. Princeton, N.J.: Princeton University Press, 1970.
- [5] —, *Commentary on Plato’s Timaeus: Volume 1, Book 1: Proclus on the Socratic State and Atlantis*. Cambridge New York: Cambridge University Press, 2006.
- [6] —, *Commentary on Plato’s Timaeus: Volume 2, Book 2: Proclus on the Causes of the Cosmos and its Creation*. Cambridge New York: Cambridge University Press, 2008.
- [7] —, *Commentary on Plato’s Timaeus: Volume 3, Book 3: Part 1, Proclus on the World’s Body*. Cambridge New York: Cambridge University Press, 2007.
- [8] —, *Commentary on Plato’s Timaeus: Volume 4, Book 3, Part 2, Proclus on the World Soul*. Cambridge New York: Cambridge University Press, 2009.
- [9] G. Deleuze, *The fold: Leibniz and the Baroque*. Minneapolis: University of Minnesota Press, 1993.

¹⁹Hegel [30].

- [10] M. Heidegger, *Contributions to Philosophy: Of the Event*. Bloomington, IN: Indiana University Press, 2012.
- [11] G. Deleuze, *Difference and repetition*. New York: Columbia University Press, 1994.
- [12] —, *Logic of sense*. London: Bloomsbury Academic, 2015.
- [13] A. M. Lyapunov, “The general problem of the stability of motion (1892),” *International Journal of Control*, vol. 55, no. 3, pp. 531–534, 1992.
- [14] H. Poincare, “Mémoire sur les courbes définies par une équation différentielle I-IV,” *Journal de Mathématiques Pures et Appliquées*, 1881-1886.
- [15] H. Poincare, *New methods of celestial mechanics*. Woodbury, NY: American Institute of Physics, 1993.
- [16] M. Serres, *The birth of physics*. London New York: Rowman & Littlefield International, 2018.
- [17] —, *Geometry: the third book of foundations*. London, UK New York, NY: Bloomsbury Academic, an imprint of Bloomsbury Publishing Plc, 2017.
- [18] A. Whitehead, *An enquiry concerning the principles of natural knowledge*. New York: Cosimo, 2007.
- [19] —, *The concept of nature: the Turner lectures delivered in Trinity College, November 1919*. Cambridge: Cambridge University Press, 2015.
- [20] —, *Process and reality: an essay in cosmology*. New York: Free Press, 1978.
- [21] B. Russell, *The principles of mathematics*. New York: W.W. Norton, 1996.
- [22] —, *The analysis of matter*. Mansfield Centre, CT: Martino Fine Books, 2014.
- [23] G. Cantor, *Contributions to the founding of the theory of transfinite numbers*. New York: Dover Publications, 1955.
- [24] A. Einstein, *Ideas and opinions*. New York: Crown Trade Paperbacks, 1995.
- [25] G. Peano, *Selected works of Giuseppe Peano*. Toronto: University of Toronto Press, 1973.
- [26] G. Frege, *The foundations of arithmetic: a logical-mathematical investigation into the concept of number (1884)*. New York: Pearson Education, 2007.
- [27] —, *Basic laws of arithmetic: derived using concept-script (1893, 1903)*. Oxford: Oxford University Press, 2016.
- [28] H. Weyl, *Space, time, matter*. New York: Dover Publications, 1952.
- [29] —, *Philosophy of mathematics and natural science*. Princeton, N.J: Princeton University Press, 2009.
- [30] G. Hegel, *The science of logic*. Cambridge New York: Cambridge University Press, 2010.