On Eric Schmid's *Prolegomenon*

Fernando Zalamea
Universidad Nacional de Colombia
https://unal.academia.edu/FernandoZalamea

A *novel* approach (profiting from Schmid's young age) to a *preliminary* problem (*Prolegomenon*) opens the richness of an *initial* enquiry, and it is to be saluted with part of the same enthusiasm offered in the reception of young Novalis's unsurpassable *Allgemeine Brouillon* (1798-1799). At the end, the future is of the youngsters, and Schmid's ambition to reflect on mathematics may well provide in a decade his flowering *Treatise on "Mathematical Structuralism", De-ontologized Metaphysics of Hermeneutics, and the "Synthetic a priori".* Of course, such quantity and depth of higher ideas in the title of the *Treatise* point to universal goals that may not be truly realized, but remember that we are in presence of an *initial* view of a universe (rather, a multiverse). As Category Theory informs us, an *initial* concept may *always* be projected into *any other* concept of the category, and Schmid's perception in his *Prolegomenon* may well be working in that direction: the richness of his structural-analysis-synthesis approach encompasses many different alternatives in mathematical thought, and *covers* (as does a Grothendieck topology), in an integral-unitary way, many differential-multivalent perspectives.

A *mixture* (recalling Lautman's "mixtes") of (1) higher-order (that is, ∞-category-theory, non elementary-set-theory) structuralism, (2) many-layered back-and-forth processes between localization and globalization, (3) neurophysiological foundations of phenomenology, and (4) complementarity of unitary/multivalent approaches to both knowledge and mathematics, offers Schmid a truly extended ground (a "shifting ground" in Merleau-Ponty's words) to *situate* some of the deepest problems in our present panorama of the ever-diverging philosophies of mathematics. The desire to *really contemplate diversity* is one of the most likeable characteristics of Schmid's *Prolegomenon*. When "diversity" stands at our order of the day, mostly through shallow intentions, Schmid's enterprise goes much farther and deeper, addressing directly the problems of stability and time, invariance and change, metaphysics and physics, universality and relativity, archetypical imagination and typed existence. Of course, a *sustained mathematical reflection* on these problems, as Schmid's *Prolegomenon* initiates, is a most welcome labor in our fleeting, chaotic, and extremely superficial times.

A characteristic of Schmid's effort is his *wide ranging spectrum* of references, from the very Masters of mathematical thought (Poincaré, Hilbert, Mac Lane, Thom, Grothendieck, Connes, Voevodsky, etc.), to profound epistemologists (Piaget, Kripke, Simondon, Deleuze, Petitot, etc.), to some of the most exciting new thinkers of the 21st century (Negarestani, Laruelle). The many *mathematical* fields traversed by Schmid (mathematical logic, set theory, category theory, topology, number theory, algebraic geometry, differential geometry), show his desire to provide a working "foundational system which conceptually unifies ordinary mathematics", at the same time *guided by geometrical considerations* (*e.g.,* topos theory or homotopy type theory), *prior to logical imperatives, and projected into the realm of our troubling philosophical times* (*e.g.,* locality, virtuality, de-ontologization). Schmid's *initial* perspective puts many tools at our disposal, but does not construct the purported system: it is an entirely *natural obstruction* in a *Prolegomenon*, which should be overcome in a future *Treatise*. Nevertheless, for the moment, it represents a desired *new intention* –yet to be developed in an entire *new voice*– which stands as a nice counterpart to both "analytical philosophy" and the so-called "philosophy of mathematical practice", which have been consistently separating themselves from mathematical creativity, oriented to either linguistic or sociological considerations, very far apart from the inventiveness of "real mathematics".