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Electronic version

URL: <https://journals.openedition.org/ejpap/6619>

DOI: 10.4000/16km3

ISSN: 2036-4091

Publisher

Associazione Pragma

Electronic reference

Charles Alunni, Francesco La Mantia, Giovanni Maddalena, Catherine Paoletti and Fernando Zalamea, "Into the Diagram. On the Legacy of Gilles Châtelet Between Pragmatism and Mathematics", *European Journal of Pragmatism and American Philosophy* [Online], XVIII-1 | 2026, Online since 14 July 2026, connection on 17 July 2026. URL: <http://journals.openedition.org/ejpap/6619> ; DOI: <https://doi.org/10.4000/16km3>

This text was automatically generated on July 17, 2026.



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Introduction

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1. Châtelet and Pragmatism

- 1 The project of this volume of the *European Journal of Pragmatism and American Philosophy* is grounded in a robust philosophical dialogue between the French philosophy of mathematics and pragmatism. This dialogue has some historical roots in the well-studied correspondence between Bergson and James, in Peirce's semiotic turn in knowledge, and in the alliance between post-structuralist philosophy and the anti-Cartesian approach of classic pragmatists.
- 2 This vague resonance between the two traditions of thought has been more recently illuminated by a special reading of pragmatism and a keener semiotic reading of Châtelet's mathematical work. As for the first of these, recent studies have deepened the pragmatist's striving for a different form of synthetic knowledge in which the force of meaningful actions, such as diagrams and experiments, is at the center of the philosophical project (Zalamea 2012; Maddalena 2015; Girel 2021). As for the second, it is important to recall recent studies on the semiotics and mathematics of Cavaillès's, Desanti's, and Châtelet's works (La Mantia, Alunni & Zalamea 2023; La Mantia & Dondero 2021; Batt 2021). These intertwined developments lead us to read the French philosophy of mathematics as a philosophical project that is alternative to the analytic one in both of its forms: mathematical logicism and the philosophical linguistic turn. Mathematics is a way to know the world of reality and, therefore, is essentially synthetic. Besides, it is a tradition of thought rooted in a performative modeling of reality. Cavaillès called "gesture" a special form of knowing embodied by mathematics.

For him, the definition of mathematics becomes “attraper le geste et pouvoir continuer” (to grasp the gesture and be able to continue) (Cavaillès 1994: 186). In this way, he avoided the irrationalism of a Heideggerian version of mathematics and the stalemate of the last logicians.

- 3 Gilles Châtelet returns to the notion of synthesis and gesture, describing mathematics as a “major gesture within the gesture of humanity” (Châtelet 2010: 178). The dimension of gesture prevents mathematics from being considered either the queen of the sciences or merely a tool, situating it among human practices. Moreover, in commenting on revolutionary developments in mathematics, for example, Grothendieck’s idea of passing from a world of points to a world of arrows, Châtelet highlights that the most serious flaw of contemporary philosophy is its incapacity to account for changes that happen in reality and mathematics. Analytic reasoning is incapable of grasping the synthesis that happens through mathematical gestures and transforms formalization into an “iceberg that is impossible to break” (*ibid.*: 178-9).
- 4 Châtelet sees that mathematics is moving forward and that philosophy has not elaborated a corresponding form of rationality. He discards any possibility that cognitivism can provide a fair accounting for the powerful rationality shown by mathematics. At a certain point in his argument, he asks for a new form of rationality in which everything is both evident to the heart and clear to the mind. For Châtelet, “what has happened” while we were reasoning is exactly the philosophical question we must tackle. “What happened?” (*Que s’est-il passé?*) (*ibid.*: 181) is the threshold between experience and reasoning, a question that can sometimes appear as suddenly as lightning but is not irrational, a question that happens when “we draw a line,” like in geometry, that was not there before. Even though Châtelet bases this view on a restoration of the term “event” and references that term in Heidegger and phenomenology, there is a family resemblance between his project and the project that derives from this stripe of pragmatist heirs.
- 5 A second area of intersection concerns ontology. Châtelet draws heavily on Deleuze’s transitional metaphysics, acknowledging the merits of his colleague and friend’s thought. However, he sometimes seems to accept words from ancient philosophy. He quotes Aristotle by referring to first or primitive matter as pure potentiality. The two traditions of thought merge when the mathematician describes this ontologically primitive condition as “obscure,” “disorder,” “confusion,” “a promise of development,” “a promise of virtuality to rise up,” “inarticulate,” and “irrational.” Pure matter is life at a stage in which there is no determination. Ontologically speaking, this amounts to saying that we are touching the realm of pure possibility where anything and everything stands. If we recall Peirce’s ontology, Châtelet is very close to the idea of the realm in which the principle of contradiction does not hold, as he parallels the cosmology of the American philosopher. Peirce called the primeval state of the world pure chaos, and Châtelet called it disorder.
- 6 Interestingly enough, this last part of Châtelet’s work offers an interesting parallel with Peirce’s logic of vagueness, elaborated during the last part of his life (Brock 1969; Monti 2025; Tiercelin 2019).
- 7 To sum up the takeaways applicable to the present project, the French philosophy of mathematics saw the necessity of a new paradigm of rationality, signaling the need for an understanding of mathematical synthesis through gestures and for an ontological realm of vagueness from which we can draw our reasoning.

2. Some Insights: Who Was Gilles Châtelet?

- 8 This constellation of epistemological and ontological themes, however, does not exhaust the field opened by Châtelet's gesture. For the gesture that he speaks of in mathematics is not confined to the formal sciences; it is, rather, the signature of a mind that thinks through rupture and across difference. This is why any attempt to situate his work within a single disciplinary lineage – whether pragmatist, post-structuralist, or phenomenological – risks betraying its most distinctive trait: a radical resistance to partitioning. The same philosopher who asks “*Que s'est-il passé?*” at the threshold of a geometric construction also poses that question to the history of philosophy, to political consensus, to the organization of the university, and to the everyday techniques of living. Châtelet does not apply a ready-made method to disparate objects; rather, he allows each object to demand its own form of intelligibility, its own gesture. Consequently, the portrait that emerges is not that of a specialist – however brilliant – but that of a thinker whose very identity resists disciplinary capture. And it is precisely here that a first, inevitable difficulty arises.
- 9 In other words, it is difficult to say who Gilles Châtelet was. Undoubtedly, a physicist-mathematician of the first order. Topology and abstract algebra, categories and fibrated spaces, as well as relativity and quantum mechanics, were the disciplinary fields in which his rich and incessant scientific activity was affirmed.
- 10 And yet, browsing through *Les Enjeux du mobile* (1993) or *L'Enchantement du virtuel* (2010), Châtelet's theoretical legacy is far from being reduced to this, albeit broad, spectrum of topics. His interest in philosophy, for example, is a passion that has always pervaded his research: from Plato to Aristotle, Descartes to Leibniz, Kant to Fichte, Schelling and Hegel (Châtelet 2010; Alunni 2010), through to the heterogeneous galaxy of the post-structural tradition, Châtelet's reflections have drawn on the creative vein of some of the most important authors and intellectual orientations in the history of mankind. If we add to these his dialogues with singular philosopher-scientists such as Roger Penrose (Châtelet 2010) and René Thom, Châtelet's profile takes on the contours of a thinker who is, if not encyclopedic, undoubtedly multifaceted and multiform. It is the continual back and forth from one conceptual horizon to another that is most striking: on the same page, one can read of points that “explode” in the form of lines, of *Dasein* and the carnality of mathematical experience, of creative metaphors and semiotic interweaving between calculations and notations. And again: of neural reductionism in the cognitive sciences, subtle problems of medieval philosophy, and questions concerning the status of the technical object in the work of Gilbert Simondon (Châtelet 2010). Such a variety of themes and perspectives gives the profound sense of his fervent intelligence. Besides being a mathematician and philosopher, Châtelet was also and above all one of the sharpest and most biting critical consciences of the second half of the 20th century.
- 11 Capital works such as *Les Animaux malades de consensus* and *Vivre et penser comme les porcs* are meaningful, tangible traces of Châtelet's political commitment. A man of his time, capable of anticipating the wiles and drifts of history, he was able to develop one of the most effective programmatic critiques of the main institutions of neo-capitalism.
- 12 From the strategies of political consensus-building in liberal democracies to the organization of knowledge in the world of the university, from the salvific myth of the

self-organization of markets to the cult of speed in the hyper-connected societies of cyber-nomads, Châtelet lavished his intelligence on an attempt to elaborate a reasoned alternative, never philistine or ideological, to the historically determined forms of contemporary life.

- 13 Apparently distant from the author's philosophical-mathematical training, this effort to transform reality has always been intertwined with the exercise of analysis and the mastery of non-trivial knowledge across the most disparate domains, including mathematics and philosophy. In this sense, despite its ramifications, Châtelet's entire theoretical-political path was traversed by a robust red thread capable – if the metaphor is allowed – of twisting into the most diverse forms without ever breaking.

3. The Published Works, More Closely Examined

- 14 The texts collected here address this complex philosophical-scientific entanglement. Despite their diversity of approaches, they share a fundamental conviction: Châtelet's thought cannot be reduced either to a philosophy of mathematics among others or to a chapter in the history of ideas. If we absolutely had to venture an overarching formula, we would say that it constitutes a sophisticated theory of what we have elsewhere called the diagrammatic gestures (La Mantia, Alunni & Zalamea 2023; La Mantia & Dondero 2021). The aforementioned contributions provide evidence of such a notion.
- 15 Opening the issue is Charles Alunni's paper. It offers a complex homage to Châtelet. In particular, the author presents his thought as an unfinished work that unites dimensions of the bestial and the divine. In addition, Alunni reads Châtelet's work through the philosophical lens of Gaston Bachelard, highlighting the necessity of a philosophy composed of diagrams, knots, and flashes of insight.
- 16 The article by Laurence Dahan Gaida investigates one of the principal theoretical cores of Châtelet's thought: the "inaugural gesture," which captures the emergence of mathematical ideas before they become fixed in formalized signs. According to Dahan-Gaida, Châtelet develops a philosophy of invention that inseparably integrates body, diagrams, and creative metaphors – or "allusive stratagems."
- 17 Francesco La Mantia's contribution proposes a comparative analysis between Châtelet's thought and the writings of the painter Paul Klee. The paper identifies many theoretical parallels and shows how Châtelet's elaborations provide the conceptual armature for a metamorphic ontology of the diagram.
- 18 The articles by Fernando Zalamea and John Alexander Cruz Morales present Châtelet's thought as a delicate intertwining of mathematics, physics, and philosophy. More precisely, Zalamea draws on an unpublished working draft by Châtelet, in which three key gestures for mathematical creativity are identified: *splitting*, *inverting*, and *augmenting*. These three gestures are compared, on the one hand, with the poetic theories of Novalis, and, on the other, with Pavel Florenskij's "inverted perspective." As for Morales' paper, it proposes using Châtelet's philosophy as a conceptual framework for understanding "physical mathematics," an emerging field that inverts the traditional relationships between mathematics and physics.
- 19 In continuity with the preceding articles, Rocco Gangle's paper proceeds to unify Châtelet's approach to mathematics and philosophy by employing two conceptual

tools: a triadic semiotics of Peircean inspiration and a category theory centered on the concept of “natural transformation.”

- 20 Next are the papers by Yuri Di Liberto and René Lew. Di Liberto explores the diagram's temporal dimension in Châtelet, linking it to Jacques Lacan's “logical time.” This is a triadic process founded on hesitations, suspensions, and hypothetical calculations. This logic is diagrammatized by the cam structure of the linguist Antoine Culioli. As for René Lew, he takes his point of departure from Châtelet's commentary on Grassmann, articulating a psychoanalytic reprise of the dialectic between intension and extension. Through the notions of Fregean *Vertretung* and Freudian *Repräsentanz*, Lew shows how the “capture of extension” described by Châtelet-Grassmann corresponds to the very movement of the signifier in the unconscious.
- 21 Romain Peter's paper takes a cue from the successes of neuro-symbolic AI in mathematical competitions to denounce its fundamental epistemological deficiencies. In particular, Peter shows how the current Transformer models function as blind engines compared to the theorematic and diagrammatic gesture described by Châtelet.
- 22 Finally, closing the volume, Catherine Paoletti's contribution analyzes the discursive and political structures of consensus in market democracies: connecting with Châtelet's critique of consensus, Paoletti deconstructs the linguistic strategies of postmodernity to denounce the transformation of democracy into a “thermocracy” of political entrepreneurs.

4. Conclusions

- 23 The brief survey conducted here offers an overview of research paths that, each in its own way, examine the multiple aspects of Gilles Châtelet's thought. Each article undertakes to develop and deepen these aspects: from aesthetic-semiotic implications (Dahan-Gaida, La Mantia) to psychoanalytic repercussions (Lew, Di Liberto); from philosophical-mathematical analyses (Alunni, Zalamea, Morales, Gangle) to neurocognitive and computational assessments (Peter) and finally to repercussions in the political, ideological, and cultural sphere (Paoletti).
- 24 The effect, it seems to us, is one of great impact and certainly full of new reflections on the theme.

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