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Platón, Heidegger y los fundamentos metafísicos de la matemática y la poesía

Plato, Heidegger and the Metaphysical Foundations of Mathematics and Poetry

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Resumen: Este artículo examina la compleja relación entre la metafísica, la poesía y las matemáticas a través de la lectura que Heidegger hace de Platón. Los diálogos de Platón revelan una profunda ambivalencia hacia la poesía: reconoce su origen divino, pero condena su irracionalidad. Heidegger desafía las lecturas tradicionales de Platón para criticar el ocultamiento del Ser por parte de la filosofía. La poesía permanece ligada a la imprevisibilidad de la naturaleza, mientras que las matemáticas se convierten en un acceso autónomo a las Formas. Este cambio marca el auge de una metafísica de la tecnicidad, que suprime la naturaleza ctónica de la poesía en favor del control racional y la abstracción.

Abstract: This paper examines the complex relationship between metaphysics, poetry, and mathematics through Heidegger's reading of Plato. Plato's dialogues reveal a deep ambivalence toward poetry: he recognizes its divine origin but condemns its irrationality. Heidegger challenges traditional readings of Plato to critique philosophy's concealment of Being. Poetry remains tied to nature's unpredictability, while mathematics becomes a self-grounding access to the Forms. This shift marks the rise of a metaphysics of technicity, which suppresses the chthonic nature of poetry in favor of rational control and abstraction.

Palabras clave/Keywords: Heidegger; Platón (Plato); Poesía (Poetry); *Techne*; *Aletheia*.

1. Introduction

When discussing Plato's understanding of mathematics, one must consider the influence of the Pythagoreans. More broadly, Heidegger's critique of Plato must be situated within the Greek cultural and spiritual world—Orphism, Eleusinian Mysteries, Eleatics, and others—that shaped his context (Burkert, 1985: 317). We cannot assume Plato's differentiation from the pre-Socratics is solely his own creation; it likely reflects cultural tensions already present. Plato replaces the dark Pythagorean notion of mimesis with methexis (participation), which he reassigns to art (Plato, *Rep*., 392d). This shift raises a central question: does art hold a similar relation to truth as mathematics and philosophy? Or is this Plato's attempt to reconcile poetry with mathematical rationality? To answer these questions, we must first examine the place of poetry and mathematics in Plato's thought, and then consider how these elements are reinterpreted in Heidegger's critique of the history of philosophy and its concealment of Being.

This paper thus argues that the long-standing tension between poetry and mathematics—revived through Heidegger's critique of Plato—reveals not only two divergent modes of articulating Being but also a metaphysical rift at the heart of Western thought. While mathematics became the foundation for a technocratic ontology that seeks certainty, universality, and control, poetry preserves a chthonic, embodied, and temporal mode of revealing that modernity has suppressed. Rather than choosing one over the other, the essay seeks to uncover how both speak, in radically different yet intertwined ways, of the same truths of Being. Ultimately, this is not a plea for the return of poetic thinking alone, but a call to confront and rethink the metaphysical assumptions behind modernity's privileging of mathematized abstraction, and to re-open the space for poetic modes of understanding as equally valid articulations of truth.

2. What is meant by „Poetry" and „Mathematics"?

To clarify the conceptual stakes of this essay, we first must define with greater precision what is meant by *mathematics* and *poetry*. These are not merely names for disciplines or genres, but designations for two distinct ways in which *Being* becomes accessible, as interpreted through both Platonic and Heideggerian frameworks. The goal is not to oppose them simplistically, but to uncover their underlying metaphysical function as modes of world-disclosure.

Mathematics, particularly in its modern, post-Cartesian and Galilean form, does not simply refer to the study of numbers, quantities, or geometrical relations. Instead, it must be understood as a fundamental mode of revealing the world—a way in which beings are disclosed as measurable, formalizable, and ultimately calculable. Heidegger argues

that mathematics projects a world of entities governed by structure and necessity, one in which things are stripped of their qualitative richness and instead rendered *accessible* through quantification (Heidegger, 1967a: 65-78). This begins already in Plato, where mathematics is elevated above the empirical world and situated on the path toward knowledge of the Forms. In *The Republic* (510c *ff*.), Plato suggests that disciplines like arithmetic and geometry "lead the soul upward," because they deal not with visible things but with intelligible structures (Plato, *Rep*. 510c-511d; *Meno*, 82b-86b). However, Plato is also aware that mathematics, unlike dialectic, begins from hypotheses it does not interrogate. As such, it *approaches* truth (*aletheia*) but does not reach it fully (Plato, *Rep*., 511b-511c).[1] This is where *methexis*—participation—enters. Plato posits that particular beings *partake* in the eternal Forms, which themselves are immaterial, atemporal, and unchanging (Plato, *Parm*., 130e-131a; *Rep*. 476a-480a). Mathematics, in this framework, is ontologically privileged because it mediates between the sensible and the intelligible; its objects (numbers, ratios, geometrical forms) are more stable than empirical things but still fall short of the radical unity of the Forms themselves. Mathematics thus becomes a transitional mode of thinking—more abstract than poetry, but not yet capable of disclosing Being in its fullness. It is *structured*, but not *self-transparent* (Annas, 1981: 256-263).

Poetry, by contrast, is traditionally associated in Plato with *mimesis*—imitation. In dialogues such as *Ion* and *The Republic*, Plato expresses deep ambivalence toward poetry. On the one hand, he acknowledges its divine inspiration, its power to move the soul and reveal aspects of truth that lie beyond rational calculation. On the other hand, he criticizes poetry for its distance from the truth: it is the imitation of appearances, not of the Forms themselves. However, this condemnation is not absolute (Plato, *Ion*, 533e-534d; *Rep*. 598b-602b). Plato himself is a poet-philosopher; his own work is filled with myth, metaphor, and dramatic form. More importantly, *mimesis* is not merely mimicry: it is a relational mode in which something absent becomes present—poetry imitates not the form as such, but the *trace* of its participation (*methexis*) in Being (Halliwell, 2002: 54). From a Heideggerian perspective, poetry escapes its Platonic subordination to philosophy by being rethought not as imitation, but as *disclosure* (*Entbergung*). In *The Origin of the Work of Art*, Heidegger claims that the work of art—especially poetry—is a site where truth happens: not as propositional accuracy, but as *aletheia*, the unconcealment of beings in their strife between earth and world (Heidegger, 2002: 50-56). Poetry reveals what calculative thinking cannot—through rhythm, metaphor, and ambiguity, it gestures toward what resists being pinned down. In this sense, poetry becomes the highest form of *logos*—not as rational account,

1 "Dialecticians do not argue on the basis of established, scientific principles, but on the basis of only reputable assumptions, i.e. of what is accepted either by all or the many or the few experts" (Rapp, 2023)

but as gathering, naming, and opening a world (Hofstadter, 2013). Thus, the distinction between mathematics and poetry is not only between number and word, or abstraction and image, but between two fundamentally different ontological styles. Mathematics seeks clarity, closure, universality. Poetry sustains ambiguity, historicity, and relational tension. And yet, both are responses to the same question: how does Being disclose itself? One might even suggest that *mimesis* and *methexis* reappear—implicitly—as the poetic and mathematical relations to Being. Where mathematics seeks participation in form through structured thought, poetry mimetically invokes the shadow or echo of form through expressive language. Each fails in its own way to exhaust truth; each opens a different path. The risk is not in either mode, but in the loss of their tension—when one silences the other. This paper, then, aims to recover that tension—not in the name of reconciliation, but to resist the metaphysical closure of truth into a single register. For it is between poetry and mathematics, in the space of their estrangement, that the question of Being remains alive.

3. Tensions

A possible step forward in addressing the tension and relation between Mathematics and Poetry can be found in The Republic, where Plato writes:

> Surely no one will reproach us if we say that there is a kind of inquiry—distinct from those already mentioned—that strives systematically to grasp what each thing is in itself. All other arts either deal with the opinions and desires of human beings, or concern themselves with the coming-to-be and composition of things, or with the care of what is becoming and composed. As for the sciences we earlier said reach toward being—such as measurement and those that follow it in order—we see that they dream about being, but cannot see it in wakefulness, since they take their assumptions and leave them untouched, unable to give an account of them. For someone who begins with what they do not know, and weaves both beginning and end from what they do not know—how can such a person ever arrive at knowledge?
>
> —Not at all.
>
> —Is it not, then," I said, "the method of dialectic alone, which, by setting aside assumptions, proceeds rightly—from a true beginning—and gently pulls and lifts the soul, long buried in the mud of ignorance, upward…? (Plato, *Rep*. 533b)[2]

Plato situates mathematics above the empirical arts but still sees it as incomplete: it "dreams" of being without fully awakening, because it begins from assumptions it never questions. Only dialectic, for Plato, transcends these assumptions and ascends to the *archē*, the true origin of knowledge. Mathematics holds a middle ground—more abstract than poetry, yet still subordinate to dialectic. The real tension is not just between modes of thought, but between dreaming and waking, approximation and clarity. Heidegger asks whether metaphysics ever truly woke from Plato's dream, or merely replaced *mythos* with number.

2 Based on the comments provided by Zovko (1997: 290).

What is essential to highlight in the cited passage is that measurement—that is, mathematics—"reaches toward something of being," yet "dreams of being but cannot see it in wakefulness, since it takes its assumptions and leaves them unchanged." In contrast, "the method of dialectic alone proceeds along the correct path." By the end of Book VII of The Republic, it becomes clear that for Plato, dialectic is more than mere dialogue, as we find in the form of his written conversations. Rather, dialectic presupposes an entire worldview—a Weltanschauung—that moves from the highest principles to the lowest details and back again, weaving all things into relation with one another. Heidegger, in tracing the etymology of dialectic, argues that the root of the word logos (in *dia-logos*, speech or discourse) derives from *légomai* (in *dia-légomai*, to enter into dialogue with another); that is, to gather, which he believes shares a related etymology with the German word legen, meaning to lay down or to place. And to the question of where this is laid down, the answer is: there, *Da*-—the "there" of *Dasein* (Heidegger, 2013a: 8). What is crucial here is that Heidegger redirects attention to dialectic as the gathering of the hyperuranian Forms in the Phaedrus—not as the beginning of reason, but as its end. When we analyze the structure of the word dialectic, we uncover two roots: dia-, meaning "through" or "across," and *légomai*, or *legein*: to arrange, to gather, to select, to count, to reckon, to say, to name, to speak. Dialectic thus already contains within itself both mathematics and poetry[3]. But if mathematics "dreams of being," then in what way does poetry speak of being?

If we read the *Symposium*, particularly Diotima's speech on Eros in which she offers a mythical and poetic genealogy of love (Bury, 1973: XXXVII; Plato, *Symp*. 201a-201c), and if we turn to the *Apology*, where Socrates recounts the oracle's proclamation and his examination of the poets (Plato, *Apol*., 20c-24e), we find a crucial moment: Socrates remarks that poets *"say"* many beautiful and true things, but do not possess knowledge of *how* they say them. This seems to point toward a fundamental distinction between the philosopher and the poet—namely, that the philosopher has something *firm*, something *concrete* in mind, and uses poetic expression only rhetorically. This would help explain why Plato, though highly critical of poetry, still includes himself among the poets. Furthermore, both *Protagoras* and *Theaetetus* suggest that this is precisely what the greatest poets do—that their poetry may in fact contain a philosophical dimension. This raises the question: is the difference between philosophy and a certain form of *chthonic poetry* perhaps not as great as it first appears? (Plato, *Thea*., 152e). The idea that philosophical arguments may themselves be poetic is also supported by Socrates' remark in the *Phaedo*, where he tells his interlocutors that he will *"sing his swan song."* A striking point of comparison can be found

3 https://en.wiktionary.org/wiki/%CE%BB%CE%AD%CE%B3%CF%89#Ancient_Greek [Consulted: 8/7/2025]; https://en.wiktionary.org/wiki/%CE%B4%CE%B9%CE%B1-#Ancient_Greek [Consulted: 8/7/2025].

in the *Sophist* and the *Statesman*, where Socratic philosophy is described in the former as a kind of *"noble sophistry"*—and therefore potentially a kind of *noble poetry*—while the latter dialogue suggests that the philosopher-statesman is closer to the poets than he might be willing to admit. This leads us to an essential question: why does Socrates claim that poetry is *true*, beyond the fact that it is *beautiful*? And how could this be substantiated? Through mathematics? Through religious faith? Or perhaps through the dialectical path?

The idea that philosophical argumentation is in some way poetic can also be supported by Socrates' remark in the *Phaedo*, where he tells his interlocutors that he will *"sing his songs"* (Plato, *Phae*., 85a-85c). A compelling point of comparison can be found in the *Sophist* and the *Statesman*: in the former, Socratic philosophy appears as a kind of *"noble sophistry"*—and therefore potentially as a form of *noble poetry*—while in the latter, the philosopher-statesman is portrayed as being closer to the poets than he might otherwise admit. This invites a crucial question: why does Socrates claim that poetry is *true*, in addition to being *beautiful*? And by what means could such truth be grounded? Through mathematics? Through religious inspiration or divine madness? Or, perhaps more profoundly, through the dialectical path?

4. Plato's Mathematical Ambiguity

Plato's view that mathematics "dreams" of Being without fully grasping it establishes a hierarchy: dialectic alone reaches the unhypothetical *archē*. Yet mathematics retains an ambiguous role—both a rational tool for ascent and a symbolic structure embedded in myth. To understand the full metaphysical weight of mathematics in Plato—and how it relates to the poetic—we must now turn to the tension between its dialectical and cosmological roles. Thus, Plato's position on mathematics, much like his treatment of poetry, is not as stable or unequivocal as it first appears. While mathematics is elevated above doxa and sensory experience, and placed on the path toward knowledge (*epistēmē*), it is not equated with full truth. Moreover, in other dialogues, especially the *Timaeus*, mathematics takes on a symbolic, mythic, and cosmological role that complicates any reading of it as pure rationality. In *Republic* VI–VII, Plato positions mathematics as an intermediary discipline. Sciences like arithmetic and geometry elevate the soul "upward" toward the Forms (Plato, *Rep*. 525b-527c), but they proceed from unexamined postulates. As Plato writes, "they take their hypotheses not as first principles, but as hypotheses—stepping stones and starting-points—until they arrive at the unhypothetical first principle of everything" (Plato, *Rep*. 511b-511c)[4]. The highest stage of knowledge, *dialectic*, alone questions these assumptions

4 All quotations from Plato's dialogues follow the translations in Platon. *Complete Works*. Ed. J.M. Cooper (1997).

and ascends to the *archē*—Being itself. Yet in the *Timaeus*, mathematics is given a very different ontological function. The cosmos is presented not through dialectical argument but as a *likely story* (*eikos mythos*) structured around mathematical proportion. The *demiurge* uses arithmetic, geometry, and harmonic ratios to impose order upon primordial chaos, forming the World Soul and crafting the elements out of Platonic solids (Plato, *Tim*. 29d-36b)[5]. While the mathematical regularities reflect a rational structure, they are embedded in a cosmological narrative rather than a demonstrative proof (Annas, 1981: 122). These two roles—mathematics as epistemic ladder and as cosmic order—stand in tension. Plato praises mathematics for its purity, yet in the *Timaeus* it operates within a *mythopoetic* structure, inseparable from image, metaphor, and teleology (Johansen, 2004: 272-276). This ambiguity is mirrored in Plato's own style: though he critiques poetry as mimetic and irrational in *Republic* X, his dialogues are composed with profound literary and poetic care. The myths of the Cave, the Charioteer, and Atlantis—each deeply symbolic—reveal that philosophical truth, for Plato, may not be fully expressible in propositional form (Brisson, 2000: 40-49). This complicates the sharp contrast between mathematics and poetry. If Plato uses myth to express what lies beyond dialectical grasp, and uses mathematics in a narrative form to model the cosmos, then both domains participate in a form of *technē*—structured world-disclosure. The philosopher, in this view, is not someone who merely ascends from poetry to mathematics and then to dialectic, but someone who must traverse and inhabit all three, recognizing their respective powers and limitations.

Heidegger will take this ambiguity seriously, arguing that Plato's philosophical project contains the seeds of a metaphysical rupture—one in which the poetic dimension of Being is gradually eclipsed by the mathematization of presence. But even within Plato, this eclipse is not complete. Poetry and mathematics are not entirely separable; they are rival siblings within the same metaphysical family (Halliwell, 2002: 54-55).

5. Chthonic Poetry and Universal Mathematics

It is precisely this internal tension in Plato—between mathematics as a rigorous path toward the Forms and mathematics as part of a poetic, cosmological narrative—that becomes decisive for Heidegger. In his reading, Plato marks both the beginning of philosophy's turn toward Being and the moment of its concealment. By elevating the *eidos* and introducing mathematics as a pathway to truth, Plato simultaneously initiates the metaphysical privileging of presence and the eventual forgetting of Being itself. Heidegger thus returns to Plato not to reject him outright, but to uncover the latent ambiguities in his treatment of poetry, mathematics, and *technē*, and to show how these very ambiguities have shaped the trajectory of Western thought.

5 On the demiurge's use of mathematics to shape the cosmos, see also (Plato, *Tim*., 53c–56c).

For Heidegger—and we may presume for Plato as well—poetry and the other artistic crafts are *chthonic* (χθών) in the sense that they "spring from the earth." They may emerge chaotically and unpredictably, blossoming into full expression from higher causes we can only speculate about, inspiring others and offering necessary vision, direction, and meaning (Heidegger, 2013b: 77). This is the source of Plato's inner conflict: some of these poetic visions are true and beautiful, but also unreflective. It is important to recall that Heidegger, in his lectures on Nietzsche, argues that Platonism contains a hidden tension between beauty, appearance, and truth. Plato holds that the radiance of beauty is both a reminder of the non-sensory *eidos* (εἶδη)—the Form—and a deceptive image that belongs to the sensible world.

Here, two metaphysical distinctions become clear. Poetry belongs to the realm of becoming. Mathematics belongs to the realm of being. Poetry introduces new possibilities more readily than mathematics; it "springs from the earth" and provides direction and intention. It is a snapshot of a particular time, place, mood, atmosphere, and narrative. Mathematics, by contrast, evaluates, fixes, and "follows things to their end."[6] It descends from the heavens and perceives things as they are according to their form. It is universal. Poetry too has form, through which it expresses a fragment of the transcendent and of truths of nature that can only be conveyed poetically (Heidegger, 2013b: 40). Mathematics, on the other hand, appears to establish that form—setting rhythm, rhyme, syllable, and stanza (Heidegger, 2009: 274). In other words, mathematical insight arises from the logical evaluation of information disclosed internally, expressed in the language of number. Poetic insight, by contrast, gathers meaning from information disclosed externally, expressed through symbolic language or myth. Mathematics is our method for describing the world in terms of the microcosm—what lies within our grasp to measure—while poetry is more obscure and intangible, as it attempts to describe the world in terms of the macrocosm, or at least gestures toward it, within the limits of language (Heidegger, 2009: 275-276). True poetry is that which in the world calls the poet to write. If we accept that there is nothing in the macrocosm that is not also contained in the microcosm, then what mathematics reveals and what poetry discloses are the same transcendental truths—though neither offers a complete description. But if we seek to approach these truths as closely as possible, we must strive to reconcile the two, or at least attempt to unite them. They

6 Poetry, while capable of evoking timeless experiences, remains inextricably embedded in the historical world from which it arises. As Gadamer notes, understanding a poem involves a *fusion of horizons*, where the interpreter must engage both the poem's historical context and their own. A poem by Rilke, for instance, bears the existential marks of fin-de-siècle Vienna, even as it gestures beyond it. The *truth* of poetry may be timeless, but its *appearance*—its language, form, mood—is shaped by the epoch in which it emerges (Gadamer, 2004: 301–307).

represent two distinct modes of thinking that both lay claim to truth, to beauty, and to the essence of being. They cannot live entirely apart from one another, but neither can they exist in full harmony together. The dichotomy is clear: once we commit to one possibility, we must close off the others and follow it to the end—otherwise, we risk remaining in *aporia* for our entire lives. And to remain undecided is, in a sense, not to live at all.

6. Quantity and Quality

While Plato expresses a certain hostility toward poetry and myth, Heidegger longs for the days when we were still held captive by such visions, seeing in them a more authentic way of being that has since been lost—sacrificed to Cartesian and Kantian speculation and the naïve belief that an "objective" mode of thinking could be achieved (Heidegger, 2013a: 22). Heidegger laments the fact that the world, through the dominance of mathematics and technology, has been flattened to the point of sterilization. The possibility of new and genuine ways of life, new modes of existence, and new visions of the future has been uprooted. In its place, everything has been subordinated to the forces of production (Heidegger, 2013a: 15; 2009: 295). The world has become nothing more than a stockpile of resources—for what greater end? No one can say. According to Heidegger, post-Cartesian mathematics is deprived of orientation, intention, and perspective. Rather than perceiving the world as a space that should be "objectively" dissected, cataloged, and then exploited, mathematics now operates within a framework devoid of any sense of direction (2013: 89-90). To the question of *why*, there is no longer any answer. We become slaves to technology rather than guiding it toward a fuller *unfolding* (*Entfaltung*) of Being. In Heidegger's view, modern thinking has abandoned any authentic engagement with poetry. The contemporary human being, caught in the fallenness (*Verfallen*) of the technological world, sees poetry merely as a *product* created by the poet—and, by extension, as something the philosopher can "use" in the service of illustrating representational concepts (Heidegger, 2013a: 8; 2013b: 124-125). Heidegger's readings of poetry are most distinctly marked by a refusal to participate in the affirming discourse of European aesthetics, with its accompanying project of bracketing epistemological categories such as subject and object (Land, 2011: 82). He claims that once aesthetic categories are transferred into linguistics or other quantitative studies of language, they assume the form of a distinction between normal language and metalanguage (Land, 2011: 84-86). Metalanguage, in its minimal form, consists of technical terminology that differs from the critical or interpretive text. This terminology has an origin fundamentally separate from the texts to which it is applied. The kinship between *the thinker* and *the poet* is thereby dissolved. In contrast to this sedimentation of metaphysics, Heidegger seeks

the complete erasure of terminological difference. The language of poetry should not be translated but brought into relation with itself. Derrida would later capture this thought in the phrase: *Il n'y a pas de hors-texte*—"there is no outside-text" (1998: 158). From this perspective, one might argue that poetry is in fact more complete than mathematics, insofar as it is *alive* and *instantiated*. Mathematics can only ever be a structure; poetry *has* structure, which makes it formally sound, but it also has *flesh*, which makes it immanent (Heidegger, 2013b: 128). Mathematics is less limited by communicative constraints, but this may also be its weakness. Once one has learned the language of mathematics, one can reproduce the phenomenon it describes. Yet, as with poetry, the transmission still depends on the skill of the one who had the experience and the ability to communicate it effectively. It is far easier to calculate the trajectory of an arrow or a planet given the necessary equations and units than it is to feel what Rilke felt when he wrote *Der Panther*. Mathematics expresses eternal truths—but eternal truths are, by definition, unchanging. It is true that there are infinite ways to reach a particular mathematical result, but we must not confuse the process with the result itself. In the final equation—$a^2 + b^2 = c^2$—there is no *reflection* of a particular time, place, or context. Each solution is equally true, even if they may differ in elegance—worthy, perhaps, of what Erdős called placement "in the Book"[7]. Yet the elegance of such a solution is timeless and bears no intentionality.

There is nothing controversial in saying that Rilke's works are timeless—but they are timeless in a different sense. For example, the texts of the Bible were interpreted differently by different generations of ancient Jews. Their value is timeless, but they are unmistakably products of their time. Mathematical theorems, whether developed by Pythagorean thinkers like Timaeus and Simmias or by non-Pythagorean figures such as Theaetetus and the young Socrates, differ less in their content than in their methods of approach. From what we can determine, their mathematical proofs are not *drawn out of* the mathematician's specific historical and existential context, even if the experience of discovery and formulation surely involved it. This does not mean that mathematical solutions are not beautiful or timeless. But how do we judge such proofs? It seems that in order to truly *value* a mathematical result, something human must be added—something that does not belong to mathematics itself and can only be expressed through poetry.

When it comes to poetry, we have figures like Jorge Luis Borges, who adored *Beowulf* and sought to recapture the *feeling* of the rustic, baritone Anglo-Saxon bard in his full aesthetic glory—just as Heidegger wanted to bring Greek thinking back into the light (Borges, 1972: 171). Aesthetics is connected to *care* (*Sorge*), and care is often linked to *lack*, to the experience of

7 This refers to the Hungarian mathematician Pál Erdős, who often spoke of the "Book" in which "God keeps the most elegant mathematical proofs and theorems", as discussed by Klarreich (2018).

fallenness, and the pursuit of *completeness*, of *authenticity* (Heidegger, 1967b: 191-195). If we are fallen and empty, then we seek that which we lack until we become whole. From this perspective, it is not hard to understand why someone living in sterile, superficial, mechanical times—like Borges or Heidegger—would be drawn to ancient Anglo-Saxon Britain or classical Greece, with their sagas, magic, mysteries, chaos, roughness, and rustic vitality. Would someone immersed in such a world, someone who lived amidst that kind of poetic existence, have the same aesthetic preferences? (Heidegger, 1967b: 166-175; 177). In contrast, we must ask why mathematics lacks this quality. Quite simply, it lacks it—unless mathematics is explicitly *poeticized*. Speaking only of the final product, poetic works are products of their time, yet possess timeless value. The same cannot be said of mathematics. Mathematics, in some sense, lacks *intentionality*. When we are trapped in a mathematical way of thinking about the world, there are no new openings, no new hypotheses, no anticipatory moods, no intentionality, no imagination. Is there a way out? This is at the core of Heidegger's critique concerning the question of Being, and of how we have collectively reduced our thinking to modes that fundamentally close off other poetic possibilities. Mathematics—or any noetic domain it represents—must remain open: open to infinite possibility, to contemplation, to spontaneous *unconcealment* (*Unverborgenheit*)[8].

6.1. Dwelling and Enframing

Another important aspect is the divergence between *poiesis* and *Gestell*. These two modes of revealing—originary *technē* and modern enframing—structure the contrast between poetry and mathematics. *Poiesis*, from *poiein* ("to bring forth"), is a revealing that lets beings emerge in their presencing. Heidegger identifies it with ancient *technē* as *Her-vor-bringen*, a bringing-forth that participates in *aletheia*. As he writes: "*Technē* is a mode of *aletheuein*... It reveals whatever does not bring itself forth" (2013a: 12-13). This includes both blooming flowers and poetic words. In *The Origin of the Work of Art*, truth "happens" in beauty—not as pleasure, but as strife between earth and world. This applies to the blooming of a flower no less than to the poetic word or the work of art (Heidegger, 2002a: 22-24). *Gestell* is modern technology's essence—not a bringing-forth, but a challenging-forth (*Herausfordern*), compelling nature to appear as standing-reserve (*Bestand*), stripped of mystery and ordered for use. Under *Gestell*, Being becomes raw data. Mathematics underwrites this enframing,

8 Modern mathematics, particularly in its post-Cartesian form, tends to operate independently of human intentionality in the phenomenological sense. Whereas poetry is often directed by mood, purpose, or existential orientation, mathematics is structured to eliminate the situatedness of the knower in favor of universality. This is not to say that mathematical thought involves no human projection—it clearly does—but that its goal is precisely to bracket subjectivity in order to attain formal purity. In Heideggerian terms, one might say that mathematics reveals beings without revealing the *Being* of those beings, precisely because it suppresses the intentional horizon through which beings are disclosed; (Heidegger. 1967a: 65–78).

becoming not meditative but abstractly formal (Heidegger, 2002a: 19-23; 2002b: 57-85). This shift from poetic *technē* to mathematical *Gestell* marks modernity's forgetting of Being. Heidegger does not oppose technology but urges *Gelassenheit*—releasement, a letting-be open to poetic worlding. "The closer we come to danger, the more brightly the saving power shines", he writes. That saving power, for him, dwells in the poetic (Heidegger, 2013a: 28).

Derrida, influenced by Heidegger, extends *technē* into the realm of trace, presence, and *différance*. In *Plato's Pharmacy*, he shows how writing—*technē*—is a *pharmakon*: both cure and poison, supplementing what was never fully present. There is no pure origin, only deferral. *Différance* names both temporal delay and spatial difference, undoing metaphysical immediacy (Derrida, 1981: 95-119). For Derrida, *poiesis* is no privileged site of Being—it is one inscription among others. Poetry and mathematics are both forms of writing, both vulnerable to ambiguity. While Heidegger longs for a return to originary revealing, Derrida sees no such return—only slippage and instability. Yet both critique enframing and affirm poetry as where truth resists reduction to function. The real difference lies in how resistance is understood: Heidegger seeks return; Derrida finds it in perpetual displacement. Thus, poetry and mathematics must be seen not simply as opposites, but as historically sedimented *technai* that might yet speak—not in domination, but in difference (Derrida, 1982: 1-27).

7. Centrality of truth

Central to our inquiry is Heidegger's reading of Aristotle's *Categories*, particularly the section dealing with the continuum. Heidegger writes:

> No student could write like this. This fundamental phenomenon is the ontological condition for the possibility of something like stretching, megethos: the position and orientation are such that from one point there can be continuous progression toward others; only in this way is movement understandable... (Heidegger, 1997: 118-119).
>
> A direction, which is uninterrupted, may have distinct points, but these points together do not constitute a direction. A line is more than a multitude of points; it has a thesis. But numbers have no thesis, so a series of numbers constitutes itself only through effect. Since a thesis is not required for understanding arithmetic, the number is ontologically prior: it seeks to explain Being without recourse to beings. For this reason, Plato begins with number in his radical ontological reflection. Aristotle, however, does not claim this. Instead, he shows that the true arche of number, the unit, the monas, is no longer a number, and therefore a more fundamental discipline is discovered, one that studies the fundamental constitution of Being, namely sophia (Heidegger, 1997: 120-121).

Here Aristotle reveals that the existence of each number entails a certain *thesis*—a quality that transcends its mere quantity (Christiaens, 2008: 4). This quality provides a pathway connecting mathematics back to poetry, which reigns supreme over *qualia*. Mathematics means nothing unless we can associate it

with phenomena, which we do through poetry. For example, in the statement: *"$a^2 + b^2 = c^2$ is the formula that explains the ratio of the lengths of the sides of a right triangle,"* the first part, *"$a^2 + b^2 = c^2$,"* is mathematics, but the phenomenon—the *ratio of the lengths of the sides of the right triangle*—is suggested poetically. Without the latter, the formula is just a number, but even that requires communication (Christiaens, 2008: 2). There remains a phenomenon inherent in numbers, something that is the "being" of three of something, namely that mathematics is an abstraction from beings and that, certainly, Being and beings precede every possibility of mathematics (Elden, 2001: 312-318).

This recalls the idea that poetry and mathematics speak about the same kind of fixed phenomena. We may conclude that poetry is strengthened by its capacity for multiple meanings but is limited in its ability to communicate phenomena clearly. Mathematics has the inverse case: it is limited by its rigid meaning but excels in the possibility of communicating phenomena. Science, which culminates in mathematics, stands in a certain tension with art, resulting in a dichotomy between the two. The primary reason for this tension is that art and science are the two most important sources from which knowledge can be drawn—insight that Nietzsche offers in *The Birth of Tragedy*—namely, the techniques of science and the techniques of art. In its modern configuration, mathematics, and thus science, excludes art as a potential source of knowledge, since the methods of the artist lack what scientists claim confers validity. The exclusive claim of science to truth is the key issue for Heidegger here. The reaction to this claim has been harmful as well, leading to the possible conclusion, held by some strands of poststructuralism, that science does not claim truth (Wolin, 2019: 195). For Heidegger, however, one cannot suppose that he rejects the possibility of scientific knowledge. Rather, Heidegger's critique of mathematics targets Kantian and Cartesian philosophy, which treat geometrical space and mathematical truths as *a priori* (Hellmers, 2004: 29-30).

Heidegger relies on Kant's use of space and time to solve the problem of schematism in the *Critique of Pure Reason* as a way to demonstrate the essential nature of time, intuition, and imagination. The problem of the division between the transcendental unity of apperception and the thing-in-itself is resolved by Kant by appealing to space and time as the conditions under which the thing-in-itself is related to categories that must be applied for it to become thinkable.

Heidegger uses this argument to show that time precedes space because space is only a map for intuitions. Time, on the other hand, has primacy as a universal intuition and is the fundamental element of pure knowledge. The essence of his argument is that it is possible to have an experience lacking any spatial reference, but impossible to have an experience lacking temporal context. Space provides only "the totality of those relations in which that which is encountered in the external sense would be arranged," which can only be understood as displayed within ordering in the succession of time (Heidegger, 1990: 32).

Heidegger then shows that there are phenomena within the "inner sense" that lack any spatial reference but contain elements of temporal sequence, such as all important moods. He argues it is impossible to conceive of spatial appearance outside of time, asserting that: *"Time has primacy over space. As a universal, pure intuition, it must therefore become the leading and supportive fundamental element of pure knowledge, the transcendence that constitutes knowledge"* (Heidegger, 1990: 32). *Dasein* is thus able to transcend itself while standing outside itself in the world around it, which is the very same world from which its identity cannot be separated (Hellmers, 2004: 29-30). The purely mathematical view of the world, like any scientism, is based on a confusion arising from the failure to distinguish between mathematical realism in nature and the isomorphism of mathematical concepts with the mathematically expressive structure of the world. Algebraic, abstract geometry—which underpins most modern mathematics—is a contingent, linguistic, conceptual system and only one of many possible models of the world. This idea can also be found in Kurt Gödel's logical proof of the contingency of mathematics, Morris Kline's critique of pure mathematics,[9] Edmund Husserl's *Crisis*, and Jacob Klein's investigations into the origins of algebra.

Mathematicians, then, simply confuse and conflate two things: the apparent apodicticity of their mathematical proofs and the apparent isomorphism of post-Cartesian–Galilean physical theory with the material world. Yet both rely, subtly, on a tautological and circular structure: mathematics suffers from the problem that "we get out only what we put in." A vivid metaphor for this predicament is the story of someone who drops their keys on the street and chooses to look only under the streetlamp—because there is no point searching in the dark where nothing is visible. The definitions of correspondence and apodicticity are silently smuggled in *a priori* at the outset, so that they may be used to "prove" the validity of a proof circularly at the end. Physical theory "corresponds" to the world because it works—but it "works" only when analyzed correctly. On further inspection, we always find that it has built-in definitions of correspondence and the physicality of the world. What is crucial to emphasize is that mathematics *as such* is not contingent, but Gödel, Husserl, and Klein each reveal the extent to which our forms of mathematics and algebraic geometry *are* contingent. Ironically, the solution to this whole dilemma may lie in "reconnecting" our capacity for concept-formation with philosophical-poetic intuition, both in mathematics and in other domains. Heidegger perhaps expresses this best in the opening lecture of *What Is Called Thinking?*, where he writes, *"Science does not think"* (Heidegger, 1968: 8), and again in *Being and Time*:

> Scientific research enacts, roughly and naïvely, the demarcation and initial delimitation of the domain of its subject matter. The basic structures of such a domain are already articulated in some way in our pre-scientific modes of experience and interpretation of the region of Being

9 Concretely, it is based on mathematics criticism and mathematics (Kline, 1982: 278–279).

> within which the subject matter is delimited. The 'basic concepts' that thus emerge remain approximate indicators for uncovering this domain concretely for the first time. [But] genuine progress does not come so much from the accumulation of results and their deposition in 'textbooks' as it does from inquiry into the way each particular domain is originally constituted [Grundverfassungen]… The real 'movement' of science takes place when its foundational concepts undergo a more or less radical, self-transparent revision [durchsichtig]. The level which science has reached is determined by how capable it is of undergoing a crisis in its basic concepts. In such immanent crises, the relation between positive investigative inquiry and the very things being questioned [i.e., the foundational concepts of the domain of mathematics and their validity] begins to waver (Heidegger, 1967b: 29-30).

What Heidegger wishes to stress here is that science today is fundamentally in crisis. This underscores the necessity of a phenomenological approach—the approach of Husserl, Klein, and Heidegger himself—as well as a renewed grounding of knowledge and its validity in the light of self-awareness. Modern mathematics is impoverished by its conventional concept of *mimesis*, which is poorly understood—or rather, not transparent. If it were transparent, it would also be clear that this concept is used in a one-sided way, always meaning "imitation" based on a material, physical, and visual metaphor. That is to say: when we attempt to *represent* the mimetic relation between our concepts (in this case, mathematical) and their "real" forms in nature, we can only think in terms of metaphors that have been smuggled uncritically into our understanding—such as Descartes's wax impression—via the natural sciences, which treat such metaphors as more rigorous (because they "work," albeit in a circular, self-justifying way) than poetic metaphors and philosophical concepts like Heidegger's *Dasein* and *authenticity* (Gillespie, 2000: 141-142).

If we read Jacob Klein, we see just how open and available metaphors were in Greek "natural ontology" compared to today (Klein, 1992: 17). Does this mean Heidegger, Husserl, and Klein are necessarily right? Not necessarily. But at the very least, their philosophy allows us to begin *thinking otherwise*, in ways not constrained by the shallow Cartesian–Kantian spatial-mechanical *mimesis* that dominates modernity. This is the beauty of phenomenology and Heidegger's philosophy: it frees human thinking. It is therefore unsurprising that Gadamer's hermeneutics, Derrida's deconstruction, and Rorty's pragmatism were all inspired or influenced by Heidegger's thought. "Correspondence" can be structured in other ways than the isomorphic reflection of one "thing" in another "thing" within a preassumed "container" of likeness—which is itself paradoxically modeled on the very notion of a "thing." Still, it is vital to underline that there remains an unresolved problem in the simple idea of "thinking differently." Even if we were to transform mathematics away from Cartesian reasoning, how would that *guarantee* an improvement in our condition? What step must we take, and in what direction must we move? A new direction would necessarily demand that we "close off" certain possibilities in favor of others. Moreover, *authenticity* by no means guarantees *virtue*—as we are unfortunately reminded by Heidegger's own *Black Notebooks*.

If we extend this to the scale of an entire society, we have a recipe for *authentic self-destruction*, for a new, potential *primordial error*. We return, again, to the Kantian problem: is intellectual intuition sufficient, or is it even possible to say anything coherent about it at all? As long as this dilemma endures, I believe that a fully affirmative or "positive" philosophy cannot exist—and we will always harbor a Platonic skepticism toward poetry.

8. Conclusion

We can only marvel at Heidegger's contribution to philosophy. The chthonic, irrational, rustic—and perhaps natural—element of the world that Heidegger reveals through the question of Being opens new possibilities and directions. It offers a way of traversing the Cartesian landscape of coordinates, with its fixed beginnings and ends, and its cosmic orchestration. But how are we to confront this? Can we—or should we—control it? It seems we have no choice but to try. Philosophy, and society more broadly, has forgotten how to reconcile with nature, how to create the distance necessary for new experiments and ways of life—a flourishing of Being sorely needed in this age of the internet, where space and time have collapsed into immediacy. These are precisely the dimensions extinguished by our obsession with certainty—by mathematics, technology, cities, and civilization. We have created a world of endless possibility, yet feeble judgment, in which culture remains sterile, offering no true blossoming. Heidegger, like others before him, foresaw the dangers ahead but lacked a clear path forward. He sought to slay the snake of Cartesian mathematics and return to a simpler, more authentic mode of being, rather than transfigure the snake into a servant of greater flourishing. Yet once Pandora's box is opened, return is no longer possible. Still, we must not lose hope.

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