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Origin and Transmission of Knowledge in Husserl and Heidegger

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Abstract

In this text a comparison is drawn between Husserl's The Origin of Geometry and Heidegger's The Origin of the Work of Art, two works written in the same period (between 1932 and 1936). It is argued that both deal with the theme of mathesis, understood in its Greek meaning, i.e. as an area concerning learning and teaching, the origin and transmission of knowledge. The fact that Husserl and Heidegger refer to two different areas shows that they understand mathesis in two different ways. For Husserl, it takes the form of a historical transmission aimed at preserving an original identity of meaning and ensuring the supratemporality of truth, while for Heidegger it takes the form of the memory of the difference that produces (and continues to produce) meaning, i.e. the eventual character of truth.

Keywords: mathesis, origin, tradition, Husserl, Heidegger, geometry, art

I.

In his recent book, *Être et genèse des idéalités. Un ciel sans éternité*, Dominique Pradelle, with reference to a well-known claim by Husserl in *Ideen III*: "*Mein Weg zur Phänomenologie war durch die* mathesis universalis *wesentlich bestimmt*" (Husserl 1971, 57), poses an interesting question: Is

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mathesis universalis the paradigmatic thread for phenomenology?

Pradelle's answer is negative. Or rather, it is negative if one takes μάθησις in its narrow, regional meaning, that is, as the discipline "of the forms of deductive theory and correlative theory of definite multiplicities" (Pradelle 2023, 86), as is especially clear from *Formal and Transcendental Logic* and *The Crisis of the European Sciences*. Such a science would in fact have three main characteristics: 1) first, it would be an exclusively deductive and non-descriptive science, thus excluding from its field of inquiry all other forms of knowledge based instead on material, and not merely formal, presuppositions; 2) consequently, it would be merely analytic, operating with merely formal concepts joined by syntactic connectives; and therefore, 3) its concepts would be a "realm of universal constructions," we might say a world of pure fabrication or production. (Pradelle 2023, 86-87)

Faced with this characterization of μάθησις, Pradelle notes that it would in fact be at the antipodes of phenomenological research. (Pradelle 2023, 87) Far from sticking to empty forms constructed in an entirely abstract and operative manner, phenomenology in fact addresses objects in their concreteness, in their intuitive and given, which also means qualitative and material, content. The concepts of phenomenology are always descriptive concepts, banishing all forms of deduction and construction. (Pradelle 2023, 87) The presumed universality of μάθησις understood as deductive and constructive science is at bottom that of formal logic: it gives us the formal conditions of truth, whereas this, for Husserl, is instead always directed to a content, namely at the thematization of possible objects. Such objects, however, cannot be constructed or produced, but are given, that is, intuited in their specific mode of being. Referentiality and intuition are thus the real cornerstones of phenomenology, as an alternative to *mathesis universalis* understood as a specific field of formal knowledge. It is the orientation toward a material truth that leads phenomenology far from a logical-deductive science: phenomenology is a descriptive eidetic science of pure

experiences, which must resolve everything into pure intuition. (Husserl 1976, §59 and § 75)

If, then, as Husserl writes, the way to phenomenology has been determined by *mathesis universalis*, it is necessary to understand what this means. The answer, Pradelle writes, is found not so much in the way mathematics, as a regional science, develops its knowledge, namely, as formal, deductive and constructed knowledge, but in the way it constitutes its object. Mathematics, namely, is an exemplary science of individuation of a region of being by means of an originary eidetic intuition, that is, the intuition of an essence which, again, is material, in the sense that it expresses and determines a particular object field, the one of mathematics, that is, the "numerical" (*Zahlhafte*).

It is then necessary to distinguish, Pradelle observes, mathematics from the mathematical: the former is a regional science that deals with mathematical objects (the numerical); the latter, which responds to the originally Greek concept of μάθησις, indicates the way of learning something. It is in this sense that μάθησις comes to coincide with the very method of phenomenology, that is, with the method of reduction, insofar as it leads back an experience to its eidetic content and to the mode of its manifestation and making itself representable. Thus Husserl can write that "phenomenology of lived experiences is by no means a μάθησις of lived experiences," (Husserl 1971, §8) or rather, as Pradelle adds, it is a μάθησις of lived experiences (*des vécus* – Pradelle 2023, 94) in the sense of a science of such lived experiences grasped in their eidetic purity.

> *Thus, the term* mathesis *does not imply any systematic reference to mathematics*, be it the geometric idealization or the formalization practiced by formal *mathesis*; taken in its generality, it designates *the attitude of research oriented on pure essences* (the latter subsuming pure imaginary possibilities, not actual existences). (Pradelle 2023, 94)

What is decisive here is neither the formalism of mathematics nor its constructivism, but rather the eidetic nature of this science and the way in which it is: through an intuition of such object essences. (Pradelle 2023, 96) But not

every science, so Husserl, belongs to the kind of science that is mathematics. (Husserl 1971, 44)

In elucidating this undoubtedly fundamental problem for phenomenology, Dominique Pradelle refers to a point that Heidegger made in the 1935 lectures on *The Question Concerning the Thing*. Pradelle observes that in his refusal to equate mathematics with the mathematical, which Heidegger argues in §18a of these lectures, he "shows himself to be very Husserlian (*Heidegger se montre fort husserlien*)." (Pradelle 2023, 96) Quoting from Heidegger: "mathematics is itself only a determinate formation of the mathematical." (Heidegger 1984, 68-69; Heidegger 2018, 46) Heidegger justifies this claim on the basis of the Greek concept of μάθησις: μάθησις is derived from the verb μανθάνω, which means "to learn," and consequently also "to teach"; μαθήματα are precisely the things that are learned, and μάθησις is the manner in which this learning or apprehension takes place. The specificity of μάθησις emerges further by comparison with other object fields, which for the Greeks consisted of: (1) τὰ φυσικά, things insofar as they arise and emerge; (2) τὰ ποιούμενα, things insofar as they are made by the human hand, products of his operation; (3) τὰ χρήματα, things insofar as they are used and available: these can be either φυσικά or ποιούμενα; (4) τὰ πράγματα, things insofar as we deal with them, that is, insofar as they are the object, in general, of our action; and (5) τὰ μαθήματα, things insofar as they are learned and taught by us. (Heidegger 1984, 70; Heidegger 2018, 47-48)

It is important to note here that μαθήματα are not a different kind of objects than the objects of regional ontologies, such as physical, usable, etc. beings. Rather, μάθημα indicates the mode of their apprehension, the manner in which such regional essences are identified (learned) and taught (transmitted, communicated). It refers then to the *way they are apprehended*, which consequently determines the *essence* of such things, their categorical being. Μάθησις generally refers to the fact that things, in order to be the object of our action, behavior and consideration as this or that, must be "learned" in some way. Μάθησις is therefore *universalis* since it does not open a particular or regional ontology, but since it concerns the

general problem of the way every particular object is given, i.e. learned and communicated.

To show that it is not mathematics that is paradigmatic for μάθησις but it constitutes only one case among others, Heidegger brings the example of a weapon, which is certainly not something "arithmetical," but is rather an object of use (χρήματον) or an artifact (ποιούμενον). "But practicing is, again, only a mode of learning." (Heidegger 1984, 71; Heidegger 2018, 48) To even be able to use a weapon we must already know what it is: to be in possession of "a still more original [mode of] becoming familiar (*ursprünglicher Kennenlernen*)" (Heidegger 1984, 72; Heidegger 2018, 49) that enables us precisely to be able to use it as such. It is this vision that opens to us the *eidos* of the object, its aspectuality or form. The εἶδος is thus the μάθημα (and it is only because of this essential connection between μάθημα and form that mathematics can be considered as a formal science par excellence): it is, as Pradelle writes, the "regional eidetic background of a being, and the μάθησις [is] the intuition of essence that expressly reveals such a background, which would remain hidden in the consideration of a particular being." (Pradelle 2023, 99)

Heidegger then observes that the Platonic saying, which is said to have been placed at the entrance to the Academy, "Let no one enter who is not a geometer! (Ἀγεωμέτρητος μηδεὶς εἰσίτω!)" does not so much mean that geometry is the fundamental science, the condition of all others, but that μάθησις, with which geometry is traditionally associated, is the condition of possibility of all science, insofar as it is oriented toward the apprehension of the regional essence of beings. It means that the knowledge of essences must precede and ground the knowledge of particular beings. This is why Heidegger translates this saying as follows: "No one who has not grasped the mathematical should have access here!" (Heidegger 1984, §18b, 76; Heidegger 2018, 51) This means that knowledge of the essence precedes knowledge of the individual beings and must justify them. If geometry assumes this particular role, it is in fact only because it is a science of forms, particularly of spatial forms, which, as such, are only one region of being (the one of the space); they acquire a general sense because, more than

elsewhere, they highlight the fact that we are dealing with forms, in the original, Greek meaning of the term εἶδος: with the aspectual configuration of something, with its way of presenting itself and making itself visible.

II.

It is in light of these considerations that I shall now turn to two texts that take on particular significance precisely in relation to what Heidegger writes in *The Question Concerning the Thing*: these are Husserl's *The Origin of Geometry*, on the one hand, and Heidegger's *The Origin of the Work of Art*, on the other. The composition of these two texts, as I pointed out elsewhere, (Chiurazzi 2023)[1] is practically contemporary and parallel each other. Finally, both texts are also coeval with the lectures on *The Question Concerning the Thing* from 1935.

In fact, their drafting dates back to the 1930s, specifically to the period 32-36. Heidegger's *The Origin of the Work of Art*, which was published in its final version in 1950, in the collection *Off the Beaten Track*, (Heidegger 1977; Heidegger 2002) was first elaborated in 1932 (published in 1989 in the *Heidegger Studien* – Heidegger 1989). The 1950 version is from a lecture that Heidegger gave in Freiburg in front of the "Kunstwissenschaftliche Gesellschaft" in 1935, and then repeated in 1936 in Zurich and Frankfurt, thus in the same time frame in which Husserl was giving the two lectures, in Vienna and Prague, that form the original core of *The Crisis of the European Sciences*. This work was also published, posthumously, only in 1954, edited by Walter Biemel, while its first two parts came out in 1936 in the Belgrade journal *Philosophia*. In particular, *The Origin of Geometry*, which appears as Appendix III to §9 of *The Crisis of the European Sciences* (Husserl 1954; Husserl 1970), was edited by Eugen Fink and published in 1939 in the *Revue international de philosophie* under the title *Vom Ursprung der Geometrie als intentional- historiches Problem*. These two works display therefore an extraordinarily parallelism in their elaboration, almost responding to each other in an implicit counterpoint, played out on two distinct regional fields: art, on the one hand, and geometry, on the other.

The reference to §18 of Heidegger's *The Question Concerning the Thing*, from which the present analysis began to focus on the theme of μάθησις, seems to suggest that perhaps at bottom this is one of the themes around which these two writings revolve, a theme certainly central to both Husserl and Heidegger. However, whereas *The Origin of Geometry* seems to address the topic head-on, dealing explicitly with a mathematical science, and on its transmission (μάθησις), Heidegger's *The Origin of the Work of Art* appears rather to deviate form this topic. Nevertheless, the remark about the motto affixed at the entryway of Plato's Academy should lead us to think that after all – as strange as this may seem at first glance – even this text could well be ascribed to the same problematic domain: it is in fact not geometry as a particular science that defines what μάθησις is. Indeed, my intent would be to show just that: namely that both of these texts have as their content the problem of the "mathematical", of μάθησις, but that with respect to it, Husserl and Heidegger take a somewhat different position. Indeed, the choice of a different region of being highlights a divergence, not only with regard to how μάθησις should be understood, but also with regard to how μάθημα should be understood (which, as Pradelle pointed out, is here the εἶδος, the "form" or essence), and even to how truth should be understood.

III.

That the central problem of *The Origin of Geometry* is that of μάθησις appears clearly from the very first lines. For what is at stake is the establishment of a scientific field that can be transmitted from generation to generation (i.e., can be taught to others) from an original intuition of its regional essence (i.e., from the original apprehension of this essence). Μάθησις, as we have seen, points to the two sides of this problem: learning and teaching, apprehension and transmission, intuition and communication. "We understand our geometry, available to us through tradition (we have learned it, and so have our teachers)." (Husserl 1954, 366-367; Husserl 1970, 355) But this tradition immediately raises some problems:

> How the living tradition of the meaning-formation of elementary concepts is actually carried on can be seen in elementary geometrical instruction and its textbooks; what we actually learn there is how to deal with *ready-made* concepts and sentences in a rigorously methodical way. Rendering the concepts sensibly intuitable by means of drawn figures is substituted for the actual production of the primal idealities. (Husserl 1954, 376; Husserl 1970, 366)

The state of geometry – which exemplifies for Husserl the general crisis of the European sciences – is apparent from the way its teaching is imparted, from its textbooks, which simply teach how to use, through a rigorous method, propositions and concepts that are already established. Concepts are made sensitively intuitive by means of drawn figures, which replace – as happens outside the Platonic cave – the original idealities they are supposed to illustrate. But never are these idealities really reactivated: the truth of geometry is consigned to its success, to its practical application, without ever reaching – to remain with the example of the Platonic cave – the noetic, that is, intuitive level of this knowledge. In this way a tradition is constituted, that is, the handing down of a knowledge, without maintaining the authentic sense, the original ideas of its founding, with the consequent risk of drifts, modifications or distortions of the original sense. Tradition is thus presented as a historical concatenation, a purely formal "inheritance" of methods and utterances that spans the centuries, while being emptied of its original sense content.

The inheritance of propositions and of the method of logically constructing new propositions and idealities can continue without interruption from one period to the next, while the capacity for reactivating the primal beginnings, i.e., the sources of meaning for everything that comes later, has not been handed down with it. What is lacking is thus precisely what had given and had to give meaning to all propositions and theories, a meaning arising from the primal sources which can be made self-evident again and again. (Husserl 1954, 376-377; Husserl 1970, 367)

The reasons why this emptying of original sense happens are both linguistic and epistemological. The former are due to the fact that a knowledge, in order to be transmitted, must necessarily be embodied in a language, and even more so

in a writing. Writing ensures the permanence of ideal objects beyond the ephemeral existence of geometers (and first and foremost of the protogeometer, an undiscoverable Thales – Husserl 1954, 378; Husserl 1970, 369), allowing their communication, that is, their teaching to others. But in this way – according to the classical logic of the *pharmakon* highlighted by Derrida, in reference to the Platonic condemnation of writing in the *Phaedrus* (*Phaedr.* 274b-275c; Derrida 1972) – the transmission of content is merely passive, which means grounded in associative or analogical operations, which can distort the original meaning: "Accordingly, then, the writing-down effects a transformation of the original mode of being of the meaning-structure." (Husserl 1954, 371; Husserl 1970, 361) Associative formations – and this is the epistemological side of this problem – constitute a constant danger in the use of language, which can be remedied, Husserl writes, by trying as much as possible to preserve an unambiguous sense, which alone can avoid, at one and the same time, both analogical and, even worse, equivocal relations.

This occurs when one has a view to the univocity of linguistic expression and to securing, by means of the most painstaking formation of the relevant words, propositions, and complexes of propositions, the results of which are to be univocally expressed. This must be done by the individual scientist, and not only by the inventor but by every scientist as a member of the scientific community after he has taken over from the others what is to be taken over. (Husserl 1954, 372; Husserl 1970, 362)

> In inheriting the content of a science, each individual scientist is, in short, like the link in a chain that must ensure the unambiguous and identical transmission of the original meaning, which can thus be transmitted – translated - without transformation. Tradition must be a transparent translation, at least as a teleological goal. (Husserl 1954, 368; Husserl 1970, 357)[2]

What is clear from these remarks by Husserl on the μάθησις of geometry – on its teaching and its historical transmission – is that at bottom, the model of this transmission is the structure of geometry itself. Indeed, in deductive sciences "the fundamental law, with unconditionally general self-

evidence, is: if the premises can actually be reactivated back to the most original self-evidence, then their self-evident consequences can be also." (Husserl 1954, 275; Husserl 1970, 365) Geometry is a deductive science, that is, a science in which every new proposition is in fact already contained in its premises and results from them in a way that preserves their content. The same happens in historical acquisitions of a science (for instance, mathematics), in its tradition as "a lively forward movement from acquisitions as premises to new acquisitions, in whose ontic meaning that of the premises is included (the process continuing in this manner)." (Husserl 1954, 367; Husserl 1970, 356) The logical nexuses of the deductive relation are after all nexuses of identity, and this ensures such permanence, that is, as we said, the "transparent translation" of the original content of the axioms into the consequences. In order for geometry to preserve its sense content, its very historical transmission must therefore reflect, so to speak, its deductive structure. Each geometer functions as a link in the deductive chain that reproduces in itself the same evidence as the first geometer: "The productions can reproduce their likenesses from person to person, and in the chain of the understanding of these repetitions what is self-evident turns up as the same in the consciousness of the other." (Husserl 1954, 371; Husserl 1970, 360) We can therefore say – and this in partial disagreement with Pradelle – that mathematics (in this specific case, geometry) is really the paradigm, not so much of phenomenology as such, but of the way in which Husserl conceives of the historical transmission of a science, a way that alone can ensure, with its concatenation of identical senses from person to person, the supra-historical and inter-subjective permanence of the sense beyond its, moreover inevitable, distorsions.

In fact, with the scriptural incorporation of the sense from time to time it becomes evident that this chaining runs into occlusions (*Verschlossenheiten*) and interruptions, and this is because the writing, at the very moment it seeks to obviate such possible occlusions, cannot help but also be their trace.[3] The continuity of overt sense is, moreover, inevitably compromised by the very conditions of the scientist's life: "When every researcher works on his part of the building, what

of the vocational interruptions and time out for rest (*Berufs- und Schlafpausen*), which cannot be overlooked here?" (Husserl 1954, 373; Husserl 1970, 363) There is, in short, in the concatenation of evidences reproduced in the very consciousness of each scientist, an inevitable intermittency, which the written text tries to overcome, but which precisely because of this it does in the end only denounce, making such intermittency, let us say, more *evident*. Intermittence – that is, the possibility that meaning can encounter gaps, that is, can refer back to something not immediately intuited – introduces an inevitably symbolic dimension within historical transmission. Symbol is in fact the reference to something absent. Geometry, or mathematics in general, is affected by this emptiness because such an intermittent emptiness is a constitutive part of μάθησις, and that is to say, of the historical inheritance that allows its intersubjective and intertemporal transmission. Writing is the sign of this intermittent, that is, symbolic concatenation.

Thus, Pradelle is right in saying that phenomenology is not a μάθησις in the sense of mathematics: it is not a deductive science, that is, a science whose evidence is inevitably intertwined with a reference to a previous evidence, which entails the risk of a break in this chain, especially when it reaches such high logical heights as to make a continuous return to the original sense very difficult, if not impossible. Instead, phenomenology is a descriptive science, which alone can rightfully claim to be faithful to the principle of all principles (Husserl 1976, §24) and its adherence to the originally offering intuition:

> It is quite different in the so-called descriptive sciences, where the theoretical interest, classifying and describing, remains within the sphere of sense-intuition, which for it represents self-evidence. Here, at least in general, every new proposition can by itself be "cashed in" for self-evidence. (Husserl 1954, 373; Husserl 1970, 363)

Only description can then be the very method of phenomenology. But if it must limit itself to the sphere of immediate evidence, how can it meet the demands of μάθησις, which requires that the original intuition be made transferable and teachable beyond the life and experience of the individual

phenomenologist? The μάθησις inevitably opens up an infinite task, precisely because it is a writing, i.e. an opening to something no longer or not yet present, insofar as the memory is not limited to the current intuition. In other words, does phenomenology respond to the task of μάθησις? And what about the fact that "description" or "*Beschreibung*" make inevitably reference, already in their names, to writing? How is it eventually to be thought, μάθησις, if it does not coincide with mathematics?

IV.

In *The Origin of the Work of Art* Heidegger takes up the distinction – though in a simplified way – that we also find in *The Question Concerning the Thing*: that between natural beings (mere things, τὰ φυσικά), tools (τὰ χρήματα) and works of art (τὰ ποιούμενα, which include χρήματα). Μαθήματα, that is, things as they are learned and taught, do not appear explicitly, but this theme runs implicitly through the entire essay. After all, this is a theme that – as we said – always runs through these regional distinctions as their universal presupposition. Indeed, to ask what the essence of the work of art is, is to ask how we distinguish it from the other beings, how, that is, we learn its essence, and how it is transmitted, giving rise to a tradition and thus to a provenance, the essence being in fact what something comes from, its origin. (Heidegger 1977, 7; Heidegger 2002, 1) Essence is the locus (the source) of a genesis and becoming, as it is in its authentic Aristotelian meaning: τὸ τί ἦν εἶναι.

As is well known, Heidegger's definition of the work of art is "truth's setting-itself-to-work", that is, actualization of truth ("setting-itself-to-work" is the literal translation of the Greek *energeia*, "actuality", a word apparently invented by Aristotle to indicate being in act, at work). This is a definition that clearly stands in contrast to Plato, specifically to his condemnation of art as three degrees far from truth, as claimed in Book X of the *Republic*.

In saying that art is three degrees removed from truth, Plato reiterated the thesis that true knowledge is only the direct, i.e., noetic, knowledge of ideas. As for Husserl, truth is

given only in the original vision of the εἶδος, and any form of further mediation (i.e., *production* from such a vision) can only be an impoverishment or, in Husserlian terms, an emptying of its fullness, which can degenerate into a true "occlusion" of the original evident intuitions. Particularly far from the truth is the painter, because the painter reproduces what the demiurge or the craftsman produces by having a more immediate relationship with the idea.

It is not without significance that Plato, in explaining this concept, refers to the representation of an instrument: the painter who paints a table or flute knows nothing either about how they are made and constructed (because he does not look at the idea) or how they are used (because he is not a flutist – *Resp*. 601c-602b). Consequently, the person who builds and uses an instrument is closer than the painter to the truth. Now, it is precisely with a similar example that Heidegger raises his challenge to Plato, taking as the starting point of his reflections the representation of an object of use: the peasant shoes reproduced in a van Gogh painting.[4]

At first glance, Heidegger's approach to van Gogh's painting is very much in line with Husserl's: when confronted with the work of art, it is necessary to re-present the lived experience condensed in it, to make it evident again. The painting, through the shoes, refers back to an experience, that of the peasant woman, and to a world, the world of life (the *Lebenswelt*). And yet, the doubt remains that such a filling of meaning is entirely appropriate to that iconic representation, that is, that it really captures the truth of it: "But perhaps it is only in the picture that we notice all this about the shoes." (Heidegger 1977, 19; Heidegger 2002, 14) This means questioning whether *truth consists primarily in an adequacy of content*, in the relation between an image (a sentence) and a state of affairs. Maybe, truth (as the work of art will show us) does not consist in the *referential* or *representational* relationship between the shoes and the world of the peasant woman.

It is for this reason, then, that Heidegger turns to another kind of work of art: the Greek temple. The Greek temple, in fact, represents nothing ("*bildet nicht ab*, portrays nothing" – Heidegger 1977, 27; Heidegger 2002, 20.) In this

case, any referential relation is bracketed, falls under the axe of an *epoché* that tends to empty the work of art of any content. The way in which Heidegger describes the coming into being – that is, the pro-duction (*her-vor-bringen*) of the Greek temple – highlights its purely formal, truly "eidetic" dimension in the sense of pure form. The temple emerges as a strife, that between Earth and World:

> The strife is not rift (*Riß*), in the sense of a tearing open of a mere cleft; rather, it is the intimacy of the mutual dependence of the contestants. The rift carries the contestants into the source of their unity, their common ground. It is the fundamental design (*Grundriß*). It is the outline sketch (*Auf-riß*) that marks out the fundamental features of the rising up of the clearing of beings. This design (*Riß*) does not allow the contestant's to break apart. It brings the contest between measure and limit into a shared outline (*Umriß*). (Heidegger 1977, 51; Heidegger 2002, 38)

The temple is constituted as the emergence of a form, of a fundamental design that delineates an outline, a figure: "The rift-design is the drawing together into a unity of sketch and fundamental design rupture and outline. […] This strife which is brought into the rift-design, and so set back into the earth and fixed in place, is the *figure* (*Gestalt*). The createdness of the work means: the fixing in place of truth in the figure." (Heidegger 1977, 51; Heidegger 2002, 38) In its origin, the work of art shows the profoundly "geometric" nature of its production. It is therefore not geometry as a particular science that serves as a model for this opening of truth, but rather it is truth, as the opening and fixation of a form, that is "geo-metric", as a figure of the earth.

We are thus faced with a rather paradoxical situation. For Husserl, insofar as truth is still an adequation between the proposition and the thing, the problem of the relation of form to its content arises, the latter having priority over form. Consequently, mathematics – like geometry -, as a formal science, inevitably encounters an emptying of its meaning content, rooted in the life-world, which requires a reactivation, an ever-renewed intuitive fulfillment. On the contrary, precisely because for Heidegger truth is not primarily adequation, it coincides with the very manifestation of a form, with the delineation of a design thanks to an original trait

(*Riß*). One can even say that for Husserl writing is a requirement of μάθησις that, while ensuring the historical transmission of knowledge, is nevertheless destined to be overcome through the intuitive reactualization of the *plena*; on the contrary, for Heidegger, writing is instead something that belongs *ab origine* to the very essence of truth, to its intrinsically "geometric" nature. Thus, if, as Pradelle writes, phenomenology is a μάθησις insofar as it is a "nonformal eidetic science," (Pradelle 2023, 91) then for Heidegger it is a *formal* μάθησις, originally marked by the trait, what makes it, consequently, a hermeneutic. By which we mean that it is fundamentally a discipline which deals with writing.

Writing is an act that destines truth to others: it is the opening of history because it enables intergenerational and intertemporal transmission. In this way truth is "preserved," safeguarded, as Heidegger states, exploiting the homophony between *Wahrheit (*truth) and *bewahren* (to preserve, to safeguard). Truth cannot subsist without the preservers:

> If, however, a work does not – or does not immediately – find preservers who respond to the truth happening in the work, that does not mean that a work can be a work without preservers. If it is in other respects a work, it always remains tied to preservers […] Preservation of the work means: standing within the openness of beings that happens in the work. This urgent standing-withinness of preservation is, however, a knowing. Yet knowing does not consist in mere acquaintance with and ideas about something. (Heidegger 1977, 54-55; Heidegger 2002, 41)

Preservers, even when they lose the original sense of what is conveyed through them, are necessary to the truth of the work, because they are necessary, in general, to truth. As for Husserl, truth is not asubjective, but omnisubjective (Pradelle 2023, 57 ff.): it is always for someone, but not for anyone, which does not mean its relativization. It belongs to the structure of truth to be *open* for someone.

V.

The Origin of Geometry and *The Origin of the Work of Art* are two texts that should, in my opinion, be read synoptically. Despite their many common themes, they

undoubtedly represent two different ways of understanding μάθησις, taken in its Greek meaning, that is, as the apprehension and transmission of the knowledge of an essence starting from its original givenness, which is the very moment when that essence first manifests itself. This μάθησις thus implies at the same time a punctual moment – an event – and a history, an immediate phenomenalization and a temporal constitution, the intervention of a first author (the protogeometer or the artist) and his heirs, who participate in the process of historical transmission of knowledge.

What in my view differentiates Husserl from Heidegger is that for Husserl the scientific community is such only insofar as its members – the various links in the chain – reproduce the original content of truth in its original evidence. On the other hand, for Heidegger the preservers preserve truth, not so much because they preserve its content, but because they remember the very fact of *being there* of the work of art, its "coming into form", which constitutes the formal – let us say transcendental – condition of truth. As a result, for Husserl a tradition of truth is possible only if in it the deductive model proper to a regional mathematical science, geometry, is reproduced at the level of historical transmission, as preserving of an identical sense-content. In contrast, for Heidegger such a tradition requires no permanence of sense at all: after all, the succession of concatenations proper to the history of being – its wanderings – is not only and simply an error. What is positively remembered and preserved in these wanderings is the sense of history, or the sense *as* history. For Husserl, it is fundamental to truth that it can be reactivated in its original content; for Heidegger, it is fundamental that it can be remembered in its original form, namely as an event, i.e. as the opening of a world, or a history, in its figurative, i.e. "geometrical" character. For Husserl, evidence is the presence of a being in an immediate intuition:

> Self-evidence means nothing more than grasping an entity with the consciousness of its original being-itself-there (*Selbst-da*). Successful realization of a project is, for the acting subject, self-evidence; in this self-evidence, what has been realized is there, *originaliter*, as itself. (Husserl 1954, 367; Husserl 1970, 356)

For Heidegger, on the other hand, evidence is the emergence of a being in its dynamic origin, as ἀ-λήθεια.[5] Thus, while for Husserl geometry serves as a model for μάθησις (which alone can guarantee the transmission of original evidence beyond the evidence limited to a single descriptive proposition) because of its *deductive* structure, we could say that for Heidegger it would do so because of its *figurative* structure (which represents nothing, but sets the conditions for a con-figuration of the world, for its order, as a mere *Riß*, rift or design – i.e. as writing[6]). This means that *only if there is a world, and not only the earth, can truth be possible*.[7]

In conclusion, I would like to suggest that all this leads back to a distinction that was the subject of Derrida's deconstructive critique in *La voix et le phénomène* (Derrida 1967): the distinction between expression (*Ausdruck*) and sign (*Zeichen*) that Husserl makes in the First Logical Investigation. For Husserl, mathematics, like every science, must retain an expressive character, insofar as its symbolism must always allow the originally evident content to shine through. For Heidegger, on the other hand, truth can only occur in the traced sign, in the rift. The outline sketch (*Aufriß*), Heidegger writes, "marks out (*zeichnet*) the fundamental features of the rising up of the clearing of beings." (Heidegger 1977, 51; Heidegger 2002, 38) In this case, instead of expression, one could speak of in-formation, in the sense of "production of a form", but also of "transmission of a sense", which has no expressive character insofar as it is necessarily mediated by signs. Whereas for Husserl emptiness is an obstacle to the transmission of sense, for Heidegger, on the contrary, it is a condition of its possibility: that there is emptiness – an absence – is the positive condition of the actual constitution of sense, a condition that takes the name of writing.

More precisely, I shall argue that Heidegger's understanding of the work of art gives it a diagrammatic status. A diagram does not represent a thing, but only changes of state: an electroencephalogram, for example, is not a representation of the brain but of its activity, or rather, it is the record of the differences that unfold in that activity. A diagram does not really reveal a "content"; in it, temporal events,

happenings, are recorded in their purely differential, i.e. relational structure. What is recorded is not a traditional and indifferent identity,[8] ensuring the supratemporal character of truth, for which mathematics is ultimately paradigmatic, but a pure recollected difference, as it appears in the tradition of art.

NOTES

[1] In that article I made a comparison between these two texts, which I take up here focusing rather on the question of μάθησις. I refer to it, however, for further insight on the subject.

[2] J. Derrida, in his Introduction to this text by Husserl, captures this aspect very well, by writing: "The possibility of translation, which is identical with that of tradition, is opened ad infinitum." (Derrida 1989, 72)

[3] On the importance of written incorporation for the meaning transmission in *The Origin of Geometry*, see Alloa 2014. Alloa highlights very well the importance of this text and its internal tensions, which in fact lead to a questioning of the principle of the principles of phenomenology, i.e. intuitionism (229 ff.), for the formation of French authors who could be considered on two different fronts of phenomenology, Merleau-Ponty and Derrida. In this theoretical debate, Trân Dúc Tháo also played a fundamental role, for whom writing, or more generally the necessity of mediation, represents for phenomenology both a constitutive condition of ideality and the source of the crisis of the sciences (Trân Dúc Tháo 1971).

[4] For a more extensive discussion of this relationship between Plato and Heidegger regarding truth in the work of art I would refer to G. Chiurazzi, 2022.

[5] F. Volpi speaks then of a "dynamic of truth", which anymore has an intuitive feature. See F. Volpi, "Avvertenza del Curatore all'edizione italiana" in Heidegger 1997, 16.

[6] This link between the *Riß* and the writing has been suggested by J. Derrida, who translated *Riß* as "trait" and highlights the graphical meaning of the words (*Aufriß, Umriß, Grundriß*) Heidegger uses in *The Origin of the Work of Art* to describe the "original" appearance of the work, that is, of a world. See Derrida 1978.

[7] Heidegger's sentence ""There is' truth only in so far as Dasein is and so long as Dasein is", contained in §44 of *Being and Time*, is another way to say that. It does not mean a relativization of the content of truth to the existence of human being, but expresses the idea that the formal condition of truth lies in the existence of human being. Without human being, in fact, there would be no possibility of "formalization", that is, of putting reality into a form (image, representation, sentence): truth does not coincide with reality, and just because it requires the "representation of reality", that is, the possibility that reality can appear in and as a world. In *The Origin of the Work of Art* this condition is not expressed by a painting, but by the temple, since – as we said

– it brings to the fore the mere emergence of the world, in which a painting is possible. For more about that I address to Chiurazzi 2017.

[8] "Pure factuality is the unrepeatable, the 'here and now' that, in its passing, stands in opposition to whatever could be said to not pass, thus to remain the 'same.' Because the ideal is indifferent to this opposition, thus to its own tension with pure factuality, it stands within the envelopment of its own sameness—it is in this way repeatable as the 'same' in every repetition. It is not the same manifest as remembered, or as a lasting image that somehow captured the likeness of something that had once happened 'here and now,' or 'there and then'; it is precisely as the same repeated both then and now, indifferent to the difference between the two, even indifferent to the fact or accomplishment of the repetition itself" (Dodd 2005, 112).).).

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