

THE RELATION BETWEEN TRANSCENDENTAL PHILOSOPHY AND EMPIRICAL SCIENCE IN HEIDEGGER'S *FUNDAMENTAL CONCEPTS OF METAPHYSICS*¹

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ABSTRACT: We propose to demonstrate that Heidegger's *Fundamental Concepts of Metaphysics* attempts to think the unthought unity of ontology and theology, or metaphysics, by staging a confrontation between transcendental philosophy and empirical science. Since this topic is a central concern of contemporary continental philosophy, this way of reading Heidegger's text may prove important for the light it sheds on the deconstruction of this opposition. Heidegger's own unique way of understanding the relation between philosophy and science involves philosophy in a relation with poetry, and science in a relation with theology.

KEYWORDS: Heidegger; Nature; Transcendental; Empirical; Poetry

INTRODUCTION

Martin Heidegger's *Fundamental Concepts of Metaphysics: World — Finitude — Solitude* (1929–30) is a sunlit text, animated by a cheerfulness rare in his *oeuvre*. It transports us into a realm littered with stones, animals, and men; among the human characters in this tableau stand poets, philosophers, scientists, and saints, each in their own way captivated by the carnival of animals passing before them. The scene that comprises

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this teeming multiplicity is described by Heidegger as “beings as a whole” or, we might say, for reasons that should become clear, simply “nature”.

In the beginning, physics and metaphysics formed a single ἐπιστήμη, which was to study both beings as a whole and beings as such.² Aristotle named these disciplines “theology” and “ontology”, and yet he failed to explain how two such disparate subjects and their subject matter could form a unity.³ The relation between beings in their entirety — everything that in any way *is* — and the *essence* of these entities is left unthought at the very inception of the history of philosophy; indeed this very history begins with this default, this failure to think the (ontico-)ontological difference. Without anything clearly conceptualised to hold them together, the two disciplines of theology and ontology, physics and metaphysics, drift apart.⁴

At the outermost limit of this history of forgetting — the “oblivion of being” (*Seinsvergessenheit*) — Heidegger proposes that it is crucial for philosophy, if it is to continue to exist in any form, to rectify this primal deficit, and finally to think the unity of ontology and theology under the single unifying title of “onto-theology”: this is the name which Heidegger gives to the history of metaphysics, or rather “first philosophy”,⁵ up to the present day, the discipline which has precisely failed to notice chasm at its very heart and origin, which Heidegger marks graphically with the hyphen placed at the very centre of the word. The hyphen represents the unthought relation and separation between the two. The very name “onto-theology” is thus intended to raise anew the question that Aristotelian philosophy had proved unable to formulate: how is it possible to hyphenate such an unheard-of expression, and to think the joint between its two topics, being and beings? The failure to formulate this question meant that philosophy itself rested on an ungrounded foundation. Until the

² Aristotle, *Metaphysics*. Trans. Hugh Tredennick. Cambridge, MA.: Harvard University Press, Two Volumes: 1933 & 1935, 1025b3–1026a3

³ Cf. *The Fundamental Concepts of Metaphysics: World, Finitude, Solitude*. Trans. William McNeill and Nicholas Walker. Bloomington: Indiana UP, 1995. *Die Grundbegriffe der Metaphysik: Welt-Endlichkeit-Einsamkeit*. Frankfurt: Klostermann, 2010 (pagination identical to *Gesamtausgabe* 29/30, 1983). Henceforth, FCM, 33/50.

⁴ Cf. the excellent account of this history, which is at least partly Heideggerian, in Miguel de Beistegui, *Truth and Genesis: Philosophy as Differential Ontology*. Bloomington: Indiana UP, 2004.

⁵ “[M]etaphysics as a title is reserved initially for the whole of “ontology”, which, however, is at the same time theology” (FCM₄₁/63). Heidegger initially follows Aristotle in speaking of “first philosophy” (πρώτη φιλοσοφία) rather than using the later name, “metaphysics”. If we speak of “metaphysics” and “physics”, it is because we are speaking from the contemporary standpoint and with the problem of philosophy’s relation to science in mind, and with particular reference to nature (φύσις).

problem of such a grounding is formulated, philosophy's future in whatever form cannot be guaranteed.

But why should philosophy's future be threatened? We know today even better than Heidegger did, at least in the context of the university, that the threat emanates from the natural sciences and their domination. To demonstrate the connection of the ancient relation between theology and ontology and the contemporary relation between science and philosophy, we might transpose the hyphen of onto-theology into the word "meta-physics". Heidegger describes the developing relationship between metaphysics and physics, philosophy and science, as a matter of "fate".⁶ Fate is a certain kind of history in which the unfolding of events is determined by some forgotten decision or absence of knowledge that will in hindsight be counted as the origin of that history. In 1929–30, Heidegger makes a unique approach to the question of ontology precisely by addressing it in the terms which are perhaps of most interest to us today: he attempts to think the destiny of being and metaphysics by investigating the relation between transcendental philosophy and empirical science. This particular approach to the end of philosophy and its forgetting of being is what makes the *Fundamental Concepts of Metaphysics* so singular and relevant for us, today. In general, within the debates surrounding "speculative realism", and concerning the relation between "transcendentalism" and "naturalism", Heidegger's text has not been entered into, and yet it is the hypothesis of the current work that it might add much to these debates, and much that is unfamiliar and unsettling. In particular, this would include the topics, so foreign to this literature, of theology and poetry. In particular, a concrete schematisation of the relations between the four disciplines of theology, science, philosophy, and poetry, is one of our primary aims.⁷

⁶ (FCM189/279).

⁷ And in general, this will allow us to suggest that we might read *Fundamental Concepts of Metaphysics* as a success, or a promising path to follow rather than a dead-end, a failure ending in aporia as almost all commentators seem ultimately to assert. For a more interesting reading of this failure, which sees it as rather demonstrating the impossibility of confining what Heidegger is attempting to think within the categories of his earlier fundamental ontology see the extremely important essay on Heidegger and naturalism by Raoni Padui, "From the Facticity of Dasein to the Facticity of Nature", *Gatherings: The Heidegger Circle Annual*, 3 (2013), 65. Rafael Winkler approaches the possibility of rejecting the common criticism according to which Heidegger's text is—in its entirety—anthropocentric, in an original and important text which might fruitfully be read in conjunction with Padui's: Winkler, "Heidegger and the Question of Man's Poverty in World", *International Journal of Philosophical Studies* 15:4 (2007), 523 et al. Mark Tanzer also attempts to rescue Heidegger from the criticism of anthropocentrism by ascertaining the manner in which Heidegger is able to assert such a thing as an "intrinsic deficiency" of the animal as opposed to a merely comparative one, "Heidegger on Animality and Anthropocentrism" in *Journal of the*

THE HYPHEN, MOOD, AND MAN'S PLACE IN NATURE

The problem of the hyphenation of philosophy and science is dealt with in the first section of Heidegger's text, the "Preliminary Appraisal". Following this, the text itself is composed of two main "Parts" [*Teile*], the first of which deals with mood and the second with animality, and eventually with λόγος: these two parts in combination are designed to solve the problem raised in the "Preliminary Appraisal".

From around 1929 until the late 1930's, Heidegger understood mood as transposing Dasein into beings as a whole.⁸ In the more subjective terms of the early Heidegger, this would mean that the way in which every entity within our experience was revealed to us was coloured by our mood. In our mood, the totality is revealed to us in a way subtly different from the conceptual grasping of the whole which one finds in metaphysics.⁹ Mood may thus be taken as one of Heidegger's early and most subtle reworkings of the metaphysical gesture. Thus, Heidegger's lecture course prepares the listener to make the leap from metaphysical comprehension to the non-conceptual transposition into the entirety of beings which is effected in mood. As this displacement of the metaphysical *comprehension* of a whole is at issue in the first part of *Fundamental Concepts of Metaphysics*, the second part of the text goes on to treat the human being in terms of its *place* within beings as a whole, "man's place in nature" as the name of so many naturalist and quasi-naturalist texts of the period would put it. And indeed, Heidegger himself, in these unique passages, treats man with the help of the natural

British Society for Phenomenology 47:1 (2016), 21–2, 26f. See especially the revealing formulations of Tanzer's view of Heidegger's own ultimate position, such as, "the animal's failure to apprehend beings as beings is an *intrinsic deficiency* that *ought* to be remedied, although it *cannot* be remedied" (ibid., 28, emphases added), "an 'ought' without a 'can'" (ibid., 29).

⁸ Our initial suggestion that *Fundamental Concepts of Metaphysics* is Heidegger's most *joyful* work was not fanciful or incidental. In the contemporaneous lecture, "What is Metaphysics?", Heidegger associates boredom (*Langeweile*), the mood most prominent in *Fundamental Concepts of Metaphysics*, with joy (*Freude*): "This boredom manifests beings as a whole. [/] Another possibility of such manifestation is concealed in our joy in the presence of the Dasein — and not simply of the person — of a human being whom we love" ("What is Metaphysics?" Trans. David Farrell Krell, in William McNeill (ed.), *Pathmarks*. Cambridge: Cambridge UP, 1998. *Wegmarken*. Frankfurt: Klostermann, 1967/1976. Henceforth WM, 87/8).

⁹ "As surely as we can never comprehend absolutely the whole of beings in themselves [*das Ganze des Seienden an sich*] we certainly do find ourselves stationed in the midst of beings that are unveiled somehow as a whole. In the end an essential distinction prevails between comprehending [*Erfassen*] the whole of beings in themselves and finding oneself [*Sichbefinden*] in the midst of beings as a whole. The former is impossible in principle, the latter happens all the time" (WM87/7). *Sichbefinden* here recalls the *Befindlichkeit* ("state-of-mind") closely associated with *Stimmung* in *Being and Time*.

sciences, which precisely investigate this physical domain. He thus comes as close to the discipline of philosophical anthropology, burgeoning at the time, as he ever will.¹⁰

Mood transports us into nature, onto the terrain of beings as a whole, and thus it sets us alongside the sentient animal, but also the unfeeling stone, which together with man himself will compose the threefold for which the text has become notorious. In any case, it is clear that the consideration of man almost exclusively in terms of mood paves the way for the unique discussion of man in terms of his place in nature with respect to the animal and the stone, the organic and the inorganic. This transposition of man onto the plane of nature is at the same time the occasion for an encounter between philosophy and the natural sciences, and so the two main parts of the text may be taken to indicate an answer to the question of the relation between ontology and theology, metaphysics and physics, raised in the Preliminary Appraisal, and thus a novel way in which we might think the ungroundedness and possible grounding of philosophy, and precisely at the site where it is most endangered: the battlefield it shares with the natural sciences, a *Kampfplatz* which is nature itself.

THE “CRUDE” THESIS — TRANSCENDENTAL PHILOSOPHY AND EMPIRICAL SCIENCE

In *Being and Time*, the human being takes the name of “Dasein”. In Heidegger’s discourse of the 1920’s and 30’s this name is steadily erased. The beginning of its decline comes when it is yoked with the word “human”. Dasein occupied what may be called a transcendental position with respect to beings as a whole, an exception to this whole which precisely renders these entities intelligible by means of the “understanding of being” which defines it, and which necessitates the strange name of “Dasein”. When it comes, in 1929–30 to understanding Dasein’s place in nature, this title, which singles man out as a transcendental exception to the natural, is no longer appropriate. Dasein is that entity which transcends nature in the direction of being by means of the *understanding*, but here we consider it almost exclusively insofar as it suffers

¹⁰ Robert Bernasconi was the first to suggest this and to highlight in particular the importance of Max Scheler, who, recently deceased, loomed large for Heidegger at the time (*Heidegger in Question: The Art of Existing*. Atlantic Highlands: Humanities Press, 1993, 30–31). The connection is also established by Steven Galt Crowell (*Husserl, Heidegger, and the Space of Meaning: Paths toward Transcendental Phenomenology*. Evanston: Northwestern UP, 2001, 230–31 et al.), and David Farrell Krell (*Daimon Life: Heidegger and Life Philosophy*. Bloomington: Indiana UP, 1992, 82). For Scheler’s anthropology, see Max Scheler, *Man’s Place in Nature*. Trans. Hans Meyerhoff. New York: Noonday Press, 1961. *Die Stellung des Menschen im Kosmos*. Bern: Francke, 1928/1947. For an excellent, recent account of the relation between Heidegger and philosophical anthropology, see the work of Beth Cykowski (2015).

from *moods*. Dasein is sunk in nature and thus is in this context more rightly called the “human being” or the “human *animal*”. Heidegger deploys the natural sciences in order to elucidate the nature of the animal in such a way that this animality can also encompass or at least directly relate to *human* nature.

Heidegger thus wishes to speak of the animal not so much for its own sake, but largely in order to elucidate the character of the human, from a natural point of view. But every comparison requires a criterion, and for reasons we shall come to examine Heidegger chooses the notion of “world”. He carries out a “comparative examination” of the worldlessness of the stone, the world-*poverty* (*Weltarmut*) of the animal, and the world-*forming* of the human.¹¹ This approach is unique in his work, as Heidegger himself obliquely indicates by contrasting it with the *transcendental* or phenomenological approach to the nature of “world” to be found in *Being and Time*, and the *historical* approach of “On the Essence of Ground”.¹²

Heidegger speaks of this tripartite schema as a “crude” or “rough” (*roh*) preliminary hypothesis.¹³

THE RELATION BETWEEN PHILOSOPHY AND SCIENCE

On the face of it, the crude thesis is akin to an Aristotelian *philosophical* description of the order of nature, but Heidegger tells us that he formulates the thesis in order to begin to think of a new relation between philosophy and science, for, after all, science will have much to say on all three of these topics. Heidegger in fact goes so far as to say that the thesis is designed to be *intelligible* only if the philosopher adopts a very specific relation to the natural sciences of the living (Heidegger does not at this stage consider the natural sciences of the stone)¹⁴: “The proposition does not derive from zoology, but it cannot be elucidated independently of zoology either. It requires a specific orientation towards zoology and biology in general, and yet it is not through them that its truth is to be determined”.¹⁵

To achieve this novel and proper relation to the sciences, Heidegger identifies two interpretations which must be avoided: (i) to take philosophy as a purely

¹¹ (FCM176-7/261-3).

¹² (FCM176-7/261-3).

¹³ (FCM177/263).

¹⁴ Krell notes that Heidegger eventually expels the stone from the threefold schema, not to mention the plant (*Daimon Life*, 116), although John Sallis gives a more positive and expansive account of the place of stone in Heidegger’s work. Cf. *Stone*. Bloomington: Indiana University Press, 1994, ch. 4, passim, and in particular, 109f, where the text we are reading is addressed.

¹⁵ (FCM187/275).

transcendental discourse, as a fundamental and regional ontology capable of determining the essence of life without reference or deference to the empirical facts uncovered by biological science. This was perhaps Heidegger's own position in *Being and Time* (in 1927); (2) to take science as a pure empiricism or positivism, uncovering facts without need of interpretation or ontology, as if there were no stratum of significance irreducible to the empirical.¹⁶

Each of these positions implies a complete separation of transcendental philosophy and the empirical sciences which would prevent us from rethinking their relation in the way that Heidegger desires, for he is seeking a relationship between the transcendental and the empirical in which neither would have absolute authority:¹⁷ “the relation between metaphysics and the positive sciences is and must be an ambiguous one [*zweideutig*]”.¹⁸ This two-way relation is what Heidegger's theses on world are intended to initiate.

From our particular point of view, then, the thesis which names the world-poverty of the animal is the vortex around which Heidegger's lecture course revolves, since it problematises the radical separation or at least the strict hierarchisation of philosophy and science without collapsing them into an undifferentiated void — in other words, it is the ignition of a deconstruction, a comparison of which with *Derrida's* version of the same, has yet to be properly staged.

¹⁶ (Cf. FCM186ff/275ff).

¹⁷ This rethinking of the relation between philosophy and science will allow Heidegger to escape Crowell's ultimately Husserlian critique according to which, around this time, and specifically in the *Metaphysical Foundations of Logic* from 1928, whose notion of “metontology” is, I would argue, what receives its most complete elaboration in the 1929–30 text, Heidegger is confusing two kinds of grounding, the transcendental condition for the possibility of meaning and knowledge — which Crowell associates with phenomenology — and an ontic causal-explanatory ground — which characterises natural science (*Husserl, Heidegger, and the Space of Meaning*, 230–31; cf. 228 & esp. 234–5). Contrary to Crowell, one should assert that the troubling of the transcendental-empirical divide is precisely Heidegger's avowed intention in his “metontological period”, which gradually returns man to nature and draws philosophy and science together into a temporary embrace. We have no space for our argument about metontology here, but a similar case is made in Padui, “From the Facticity of Dasein to the Facticity of Nature”, 62ff: “Whether or not Heidegger acknowledges this explicitly, the questions of animality and of metontology bring his project of fundamental ontology to the brink of naturalism and to a radical blurring of the contours of the ontological difference”, 66, cf. 62ff.

¹⁸ (FCM188/277).

BEYOND TRANSCENDENTALISM AND EMPIRICISM

Let us now see how Heidegger attempts to move beyond both empiricism and transcendentalism, on the basis of his theses on the world.

First of all, pure empiricism may be overcome by establishing that scientific “facts” are inevitably subjected to an interpretation: “a fact yields nothing by itself, [...] every fact we can produce has always already undergone a process of interpretation [*eine Auslegung*]”.¹⁹ In truth, then, a science which claims to work purely on the level of facts will already be operating with certain interpretations. What the philosopher is then called upon to do is to *take up* the scientists’ own, often implicit and perhaps naive interpretation of these facts, and to give that interpretation a properly “metaphysical” or philosophical form.²⁰ Heidegger tells us that his thesis on world-poverty can be “illustrated” by scientific research, but only if this research is *interpreted* philosophically: “recent research in biology, provided that we are capable of interpreting it in a philosophical way, strongly suggests the possibility of illustrating this thesis directly”.²¹

In turn, philosophical interpretations requires something to interpret, and so this interpretative relation between philosophy and science implies that we cannot begin from a purely transcendental position and force whatever facts this allows us to discover into a pre-existing framework of meaning that will not allow itself to be modified by whatever is brought to light; facts cannot be merely subordinate to philosophy, just as we cannot begin from some supposedly raw data: we must begin from a philosophically enlightened understanding of the deliverances of science, in other words, from the twofold.

In order to understand why it is important for philosophy not to impose its own interpretation in this authoritarian manner, we might examine Heidegger’s own example of biology, a privileged science in this text. The metaphysical importance of contemporary biology is that it refuses to reduce life to chemical and physical processes.²² Heidegger describes this particular tendency within biology as “metaphysical” because it insists on a fundamental distinction between *species* or *levels* of being.²³ Biology in certain of its contemporary forms thus gives us an example of a

¹⁹ (FCM190/281).

²⁰ (Cf. FCM189/278).

²¹ (FCM192/284).

²² (FCM188/277–8).

²³ And I would suggest that this is precisely what Heidegger himself is interested in doing with his thesis on stone, animal, and man. This terminology risks importing a vocabulary deployed in Heidegger’s slightly later work: for Heidegger’s comments on the “levels of being” (*Stufen des Seyns*) see *Contributions to Philosophy: Of the Event*. Trans. Richard Rojcewicz and Daniela Vallega-Neu. Bloomington: Indiana UP,

science which is *already* philosophical in a certain way and thus might embody something like the relation which Heidegger is pursuing.²⁴ This accounts for the privileged place it is afforded in Heidegger's text. The science of biology can then be used to *illustrate* Heidegger's *philosophical* thesis and also to *nuance* it in certain ways. The question of where this thesis itself derives from — philosophy, science, or neither — must for the moment be deferred, but it will prove to be central to the originality of Heidegger's text in the context of contemporary debates.

To summarise what we can learn from the example of biology with respect to the Heidegger's theses on the world:

On the one hand, science modifies the philosopher's ontological hypothesis, spurring him (Heidegger) on to elaborate and refine his "crude" thesis in light of the scientific data on animal "worlds" — or environments — which he exposes at some length. This amounts to something like the empirical perfecting of an *a priori* ontological hypothesis.

But on the other hand, Heidegger insists that, "[a]t the same time the thesis is framed in such a way that, like *every* metaphysical thesis, it is capable of compelling [*zwingen*] [science's] positive research to engage in fundamental reflection [*grundsätzlichen Besinnung*, a reflection upon foundations]".²⁵

To clarify both of these points, let us see how the philosopher, Martin Heidegger addresses the work of the scientist, Jakob von Uexküll, a life-scientist of a particular kind, indeed an ethologist or scholar of animal worlds. With his work we reach perhaps the high point of philosophical science, which was to have a long and distinguished posterity in philosophy.²⁶

2012. *Beiträge zur Philosophie: vom Ereignis*. Frankfurt: Klostermann, 1989. Henceforth: CTP, 215f/273f, where he also expresses concern about the phrase "world-poverty" and indeed casts some doubt on the locution, "worldlessness" (CTP218/277).

²⁴ Biology itself has today been recognised again as a site at which this encounter between philosophy and science might take place in an especially fruitful way. One might instance the work of Catherine Malabou and Adrian Johnson, individually and together, as well as that of Martin Hägglund, "The Arche-Materiality of Time: Deconstruction, evolution and speculative materialism" in Jane Elliott & Derek Attridge (eds.), *Theory after "Theory"*. London: Routledge, 2011, 265–77, and Lorenzo Chiesa's recent work, *The Not-Two: Logic and God in Lacan*. Cambridge, MA.: MIT Press, 2016.

²⁵ (FCM192/284, emphasis added).

²⁶ I am thinking in particular of Gilles Deleuze and Giorgi Agamben.

UEXKÜLL: WORLDS OF ANIMALS AND MEN

At the very beginning of his discussion of the animal's poverty, Heidegger praises Uexküll.²⁷ Uexküll had devoted his life's work to establishing the fact that animals do indeed have worlds, in the form of environments or surrounding worlds (*Umwelten*). This crucial difference between the theses of philosophy and science will prove crucial in our explication of precisely how the two disciplines are to exert influence upon one another.

According to Uexküll, an animal's world is composed of those signs to which it is compelled to respond in a certain way by the requirements of survival, and to which for that very reason its perceptual system and bodily organs are adapted.²⁸

In terms of Heidegger's own itinerary, it may be said to have been the positive data provided by Uexküll's experiments which impelled Heidegger to modify the purely transcendental position of *Being and Time* which implies that man alone has a world. In this way the transcendental analysis is opened onto a genetic and naturalistic account which it had previously seemed to rule out as irrelevant.

But philosophy in turn has something to teach the sciences here. Simply to generalise the notion of "world" and apply it to both humans and animals would be ontologically deficient in its assumption that animals have environments in exactly the same *sense* as humans, the only difference being a lower level of complexity in animal *Umwelten*.²⁹ Uexküll's implicit ontological univocity is inadequate from a philosophical standpoint which sees the human being alone as endowed with λόγος and possessed of the related ability to recognise beings *as* particular things and ultimately simply *as beings* — beings "as such" and hence as manifestations of being *itself*. From the standpoint of λόγος, the animal's "poverty" is qualitative rather than quantitative, and therefore philosophy urges science to retain an ontological distinction of levels to which elsewhere it had shown itself receptive.

Thus, while the scientist is instrumental in drawing the philosopher away from a pure transcendentalism which opposes man and animal *a priori* in the way of traditional metaphysics, towards a more naturalistic understanding of man and animal

²⁷ (FCM192/284).

²⁸ Uexküll, "A Stroll Through the Worlds of Animals and Men: A Picture Book of Invisible Worlds" in Claire H. Schiller (trans. and ed.), *Instinctive Behaviour: The Development of a Modern Concept*. New York: International Universities Press, 1957 [1934], 10–11; cf. *Theoretical Biology*. Trans. D. L. Mackinnon. New York: Harcourt, 1926, 126ff.

²⁹ Philosophical anthropologist, Arnold Gehlen, echoes this critique (*Man: His Nature and Place in the World*. Trans. Clare McMillan and Karl Pillemer. New York: Columbia UP, 1988. *Mensch, seine Natur und seine Stellung in der Welt*. Wiesbaden: Anthenaion, 1940, fourth edition, 1950/1974, 70).

as part of a natural continuum, Heidegger's three theses may be understood as a warning not to assert this continuity at the expense of abolishing all distinctions between the various kinds of being. This is the temptation of a purely non-philosophical empiricism inherent in modern science, and into which Uexküll risks falling. This tendency often leads science to refuse admittance to anything besides mere entities, as Heidegger in a contemporaneous text suggests: for scientists, apart from entities, there is "nothing", a nothing to which philosophy attempts to assign another valence.³⁰

It is as if philosophy ensures that the deconstruction of the opposition between the transcendental and the empirical — as well as that between the human and the animal — does not simply collapse into indifference, but establishes a new, non-metaphysical (but also non-empirical-scientific) difference between the two.³¹

³⁰ (Cf. WM64/4).

³¹ Although Derridean deconstruction would at this stage seem to prefer a multiplicity of possible differences or ways of taxonomising the field, and Heidegger seems to suggest a single, novel difference, the latter here comes as close as he ever will to the approach towards animals recommended by Derrida, although Derrida himself never quite fully recognises this proximity, for reasons that would need to be established: "Heidegger takes no account of a certain 'zoological knowledge' that grows, becomes differentiated and more refined regarding what is brought together under this so general and confused word 'animality'" ("Heidegger's Hand (*Geschlecht II*)". Trans. John P. Leavey Jr. and Elizabeth Rottenberg in Peggy Kamuf and Elizabeth Rottenberg (eds.), *Psyche: Inventions of the Other, Volume II*. Stanford: Stanford UP, 2008. *Psyché: Inventions de l'autre*. Paris: Galilée, 1987, 40–41/428) Elsewhere it is on just this point that Derrida appends a promissory note announcing a reading of *Fundamental Concepts of Metaphysics* yet to come (*Of Spirit: Heidegger and the Question*. Trans. Geoffrey Bennington and Rachel Bowlby. Chicago: University of Chicago Press, 1989. *De l'esprit: Heidegger et la question*. Paris: Galilée, 1987, 12/28–9, 47ff/75ff). And yet, in the second volume of *The Beast and the Sovereign*, when this reading seems finally on the verge of arrival, Derrida does not move significantly beyond his earlier analyses and so never comes to see just how close Heidegger's position is to his own (cf. *The Beast and the Sovereign. Volume II (2002–2003)*. Ed. Michel Lisse, Marie-Louise Mallet, and Ginette Michaud. Trans. Geoffrey Bennington. Chicago: University of Chicago Press, 2011. *La bête et le souverain*. Paris: Galilée, 2010, 196ff/277ff).

Heidegger may be said to be even closer to Derrida than we initially asserted, if we accept the idea that he posits an opposition while at the same time admitting that this opposition can only be posited from a certain perspective, with a particular criterion (Derrida will say, thanks to a "decision"), which results in a *certain* taxonomy of the animal realm, but one that is in no way definitive. That perspective, at this particular time, is explicit and avowed: it is that of the world.

But perhaps even on this account, what might set Heidegger apart is that, for him, it is also necessary to have a criterion according to which one might carry out the *first* stage of Derridean deconstruction, the positing of continuity which flattens out metaphysical oppositions, and not simply a criterion for the final stage of decision.

THE ANIMAL DRIVE

One can assert an opposition between the human and the animal in one of two ways: either as a simple transcendental assertion in the manner of metaphysics, or in a way that finds something akin to this opposition in the data of the natural sciences themselves (with the appropriate philosophical impetus). The first is ruled out as metaphysical, but the latter is Heidegger's way to the unthought non-metaphysical root of metaphysics, attained with the help of the natural sciences. The particular scientific *datum* which Heidegger seizes upon for the purpose of establishing the proper difference between man and animal is the drive (*Trieb*).

We have already encountered drive without knowing it. It is Heidegger's name for the animal's bi-univocal relation with its *Umwelt*, the one-to-one relation between stimulus and response which for the philosopher, following contemporary biology, is reflected in the animal's *organs*. To each organ corresponds a certain instinct or drive which, when triggered by an environmental signal or sign, urges the animal towards the fulfilment of that particular organ's function.

ORGAN AND ORGANON

Heidegger's philosophical interpretation of Uexküll's theory attempts to draw a broadly naturalistic distinction between the animal organ and the human *organon* or tool. One of the things that distinguishes the organ's "capability" (*Fähigkeit*) from the serviceable "readiness" (*Fertigkeit*) of the tool is that the former is inherently driven towards its own actualisation: "self-driving and being driven toward its wherefore [*Wozu*] is only possible in that which is capable [*Fähigen*] inasmuch as capability is in general *instinctually driven* [treibhaft]. Capacity is only to be found where there is drive".³²

In terms which are now well-known, for Heidegger, the animal is captivated (*benommen*) or gripped by its finite environment. At a certain point, Heidegger explicitly states that "[t]he *drive* is captivated [*benommen*]" (FCM_{243/354}, emphasis added). This is to say that in captivation, the animal drives are compelled to leave their state of potentiality and to become actual, and that this happens automatically, after the manner of a machine. The drive is the mechanism which binds one of the organism's capabilities to the environmental stimulus which summons it.

The tool, on the other hand, has its own specific possibilities, but these possibilities are not inherently impelled towards their own actualisation. They are capable of remaining "merely" possible. Heidegger considers these un-actualised possibilities to

³² (FCM_{228/334}).

be *genuine* possibilities, and the ultimate forms of this type of possibility are death and indeed being itself, the never-actual. We might say that Heidegger's metonym for man's especial relationship with possibility is "(being-towards-)death".

Although Heidegger's text is not unambiguous on this point, it seems that the ability to experience death is what makes the experience of the tool possible. In other words, death is first in the order of foundations. Thus the most crucial criterion of humanity is not the use of tools (as in *homo faber*) but the relation to death. Through a primal encounter with death, man experiences what it is to suspend actualisation indefinitely, and he is then able to relate in a similar way to all of the other possibilities he encounters, and this allows him to see in simply material things the possibility of having functions, of being ready-to-hand (*zuhanden*). Man is the animal capable of resisting and deferring.³³

Death has a similar effect on the human drive: it frees the drive from its compulsion to actualise itself. But it also has another effect: for Heidegger, as for many of the avowed philosophical anthropologists, the animal world is a finite and unique world.³⁴ It is comprised of a fixed number of signals, just as the animal is given a finite number of organs, which it cannot within the span of an individual life supplement

³³ The animal is compelled to actualise potentials that are already given. It does not create new ones in the course of its individual life, nor can it maintain these possibilities in their purely potential state. This is why it cannot relate to its own death, at least in its always impending, as yet unactualised form. This would seem to reverse the order of explanation that we found in the case of man; but for animals, a purely naturalistic explanation may be fitting, and, as a result, this order of explanation seems to be permissible for Heidegger. As he will always have insisted: "animals do not die", but we can now give a naturalistic explanation for why that is so in terms of their relation to possibility as dictated by their drives. Cf. "To die means to be capable of death as death. Only man dies. The animal perishes. It has death neither ahead of itself nor behind it" ("The Thing" in *Poetry, Language, Thought*. Trans. Albert Hofstadter. New York: Harper and Row, 1971. *Vorträge und Aufsätze*. Frankfurt: Klostermann, 2000, 178/180. "Building Dwelling Thinking" in *ibid.*, 150–51/152: here Heidegger italicises the "as" [*als*] in the phrase, "death *as* death". Cf. BT284/240–41).

This would have to be reconciled, however, with Heidegger's often criticised statement to the effect that capabilities — and hence drives — *precede* the organs which actualise them: one does not see because one has eyes; one has eyes because one can see (FCM218/319). At this particular point in the text, Heidegger is speaking primarily of animals, with the aim of distinguishing organs from tools, and he does not make it entirely clear whether the same structure applies to humans, even when he introduces a possible distinction between human and animal capabilities: "it is indeed questionable whether what we call human seeing is the same as animal seeing [...] although human beings and animals both possess eyes" (FCM219/320). In general, the suggestion seems to be that a proper thinking of possibility will not model it upon its actualisation and render it ontologically secondary to the latter.

³⁴ (Cf. FCM198/292).

with natural or artificial prostheses. But Heidegger has demonstrated in *Being and Time* that the ever impending threat of death prevents the human from ever finally being at home in any one world. Death thus gives us the freedom to change worlds or to build a new world around ourselves — to be “world-forming”. Thus it opens up an infinite range of possibilities, including the construction of new organs and the “re-functionalising” of old ones.³⁵ It drives us beyond any finite set of things and towards *every* thing there is: it opens us to beings as a whole and hence, theoretically speaking, to the activity of philosophising. Thus man is capable of thinking not just the possibilities of particular things, but possibility as such, which is to say, being itself. He is capable of *thinking tout court*. Thinking would therefore take place in the suspension of the drive to action.

Heidegger has thus demonstrated that the drive to know, which Aristotle identified as innately human at the very beginning of his *Metaphysics*,³⁶ the metaphysical urge itself, may be seen as a development of the animal drive, if the latter is interpreted philosophically. Man and philosophy would be the result of a continuous evolution but at the same time a qualitative leap or revolution in nature which sets up an opposition between man and everything that has come before. This would be one way of understanding what a non-metaphysical postulation of an opposition between animals and humans might be.

ON THE DRIVE TO PHILOSOPHISE. POETRY.

We have spoken of a philosophical interpretation of certain deliverances of the natural sciences (the drive, understood as the origin of man and philosophy), but this leaves open the question of what dictated that either discipline should attend to these *particular* facts. Must there not be something that stands outside of the two disciplines of philosophy and science which first bestows this gift upon them?

Ultimately drive is chosen as a criterion of continuity between man and animal because Heidegger’s ultimate concern is with man’s ability to form worlds. From at least *Being and Time* onwards, this ability to articulate reality into a space of possibilities, which Heidegger describes as “significations” (*Bedeutungen*), is described as “*Rede*” or discourse, which is intended to translate the Greek word, *λόγος*. Man’s ability to form worlds, or to use *λόγος*, and hence, by means of the infinitisation of possibility that we

³⁵ Thus one might explain this infinitisation by referring to the non-mechanical relation to actualisation that characterises human tools. Does this delay render the particular use to which an entity is put contingent and susceptible to infinite and unaccustomed variation?

³⁶ “Π ντες ἀνθρωποι τοῦ εἰ δέναι ὀρέγονται φύσει” (*Metaphysics*, 980a22).

have witnessed, to do philosophy, is *presupposed* by Heidegger's lecture course, or taken as a given.

But what justifies this presupposition? What is the provenance of the gift?

The source is *poetry*. It is as if, to clarify the relation between philosophy and science, it were necessary to consider the still more ancient relation between philosophy and poetry. And it is here that we begin to move into a region frequently left altogether out of consideration, even contemptuously dismissed, by many of the contemporary discourses on philosophy and science.

Early on in the lecture course, the philosopher Heidegger gives the stage to the poet Novalis in order to recall his description of philosophy as a homesickness (*Heimweh*), a longing to be at home, or, as Heidegger translates this, "a *drive* [*Trieb*] to be at home everywhere".³⁷

If metaphysics was the *desire* to comprehend beings as a whole, the *drive* that goads Heideggerian man is what first makes beings as a whole accessible: "to be at home everywhere means to be at once and at all times within the whole [...] [*/*]. This is where we are driven [*getrieben*] in our homesickness: to beings as a whole [*zum Sein* (sic) *im Ganzen*]³⁸".³⁹ This is philosophy, the only thing Heidegger explicitly presupposes about man at the beginning of his discourse: "What is man? [...] We do not know. Yet we have seen that in the essence of this mysterious being, philosophy happens [*die Philosophie geschieht*]"⁴⁰ And this presupposition issues *not* from science or from philosophy itself, but from *art*, from poetry.

And yet we should be attentive to the fact that man's sickening for philosophy is also a *drive*, a feature which man and animal *share* and which *science* was seen to investigate. Thus, poetry introduces not only the idea of philosophy, which qualitatively distinguishes man and animal *a priori*, it even introduces the notion of drive in terms of which *science* could determine a *continuity* between man and animal, empirically, *a posteriori*. It is as if while science pursues a continuist explanation, it still need a criterion *in terms of which* to posit this continuity, some single trait which will define the particular immanence it wishes to assert, and that trait is provided by poetry.

Thus we say that poetry is needed on Heidegger's account in order to achieve the combination of transcendental philosophy and empirical science which he seeks. As a

³⁷ (FCM₅/7, translation modified, emphasis added).

³⁸ Surely a mis-transcription of "Seiende *im Ganzen*".

³⁹ (FCM₅/7-8).

⁴⁰ (FCM₇/10).

result of this complication with poetry, it becomes possible to demonstrate that *neither* the postulation of λόγος to distinguish man from animals *nor* the notion of drive as shared between them are to be taken as simply transcendental or simply empirical.

In any case, the philosophical drive identified by the poet transposes man into beings as a whole, rendering the very being of all entities apparent to him. This transposition into the whole is precisely what Heidegger will address in the section of the *Fundamental Concepts of Metaphysics* devoted to mood. Drive, we might say, is the foundation of mood, and that includes the specifically human, philosophical moods.

Homesickness as the infinite metaphysical drive of the human is precisely a mood of woe (*Weh*), closely akin to the *melancholy* (μελαγχολία, *Schwermut*) in which philosophy originates according to the testimony not of a poet but of a philosopher.⁴¹ Homesickness is the driven, restless, and uncanny attunement that causes man to surpass the animal's impoverished world and makes it possible to consider an entity in isolation from any particular world, a being *as such*, and indeed to reach being itself, which may be spoken of in λόγος. The human animal is the animal driven towards a mood in which it can philosophise.

THE POET AND THE SAINT: DEATH AND THE OUTSIDE

Poetry, then, introduces the idea that man is defined by both philosophy and drive, transcendently opposed to the animal and yet empirically continuous with it. This combination of the transcendental and the empirical that poetry allows Heidegger to think enables us to make sense of the idea that the animal's poverty in comparison with the riches of the human world might be *constitutive* rather than merely a distortion of perspective caused by the adoption of a particular standpoint, that of λόγος.⁴² This possibility is raised by Heidegger in at least two curious passages, which go so far as to suggest that the particular impoverishment which Heidegger had identified in the animal world is *objectively* more significant than those other ways in which the animal is in fact our superior.⁴³ He also associates this apparently inherent lack with the important notion of *suffering*.

⁴¹ (FCM183/271). Here one might open a long parenthesis on the relation between melancholy and the other philosophical moods: wonder, the perplexity of ἀπορία, and the *Stimmung* which Heidegger is most concerned with here: boredom.

⁴² Heidegger speaks elsewhere of the necessity for a "deconstructive" approach to the living thing (FCM255/371–2) (cf. BT291/247).

⁴³ "[That] the *essence of life can become accessible only if we consider it in a deconstructive fashion* [...] does not mean that life represents something inferior or some kind of lower level in comparison with human

The animal, Heidegger tells us, may be dimly aware that it is imprisoned within a finite environment which Heidegger describes as a “disinhibiting ring” (*Enthemmungsring*), the constellation of stimuli which release the drives from their state of potentiality. The animal may be sensible of the existence of an alien “other” beyond the circle, where things are not simply given in terms of the animal’s own restricted possibilities — an “in itself” beyond the “for us”, or an “as such” from which they feel themselves forever debarred. And this is what makes them suffer.⁴⁴

The animal suffers from being stimulated by something which it knows to be partly unknown. It is aware that there is something there which, without the animal’s being able to control or resist it, contingently stimulates its sensory surface. Heidegger describes this as an “essential shattering” or “disruption” of the animal’s horizon, an intrusion of “otherness” which may be considered a *third* kind of “givenness” somewhere in between a being and a non-being. The entity is given, but not as such.⁴⁵

with the animal’s being open for that which disinhibits, the animal in its captivation finds itself essentially exposed to something other than itself [*wesenhaft hinausgestellt in ein Anderes*], something that can indeed never be manifest to the animal either as a being or as a non-being [*Nichtseiendes*]. Rather, that which disinhibits [...] brings an *essential disruption* [*eine wesenhafte Erschütterung*] into the essence of the animal.⁴⁶

An animal can feel the limits of its world, but it cannot give a name to what lies beyond them: it is deprived of the word ($\lambda\acute{o}\gamma\omicron\varsigma$). It thus obscurely feels that entities are *more* than they appear to be, that they have an “as such” or “in itself”, but it can

Dasein. On the contrary, life is a domain which possesses a wealth of openness with which the human world may [*vielleicht*] have nothing to compare” (FCM255/371–2) (cf. FCM194/286–7).

⁴⁴ Here Heidegger is drawing on the etymology of *Armut* (poverty) to suggest a connection between the animal’s world-poverty and a certain mood: “*Armut*” contains the word “*Mut*”, meaning “spirit” or “cheer” (cf. FCM195/287–8). The animal’s poverty amounts to its being “in poor spirits”. It feels its own impoverishment.

⁴⁵ This harks back to Heidegger’s description of the lizard’s encounter with the rock: “we ought to cross out the word ‘rock’ in order to indicate that whatever the lizard is lying on is certainly given *in some way* [*irgendwie gegeben*] for the lizard, and yet is not known [*bekannt*] to the lizard *as a rock*. [...] [W]e imply that whatever it is is not accessible to it *as a being*” (FCM198/291–2). The rock together with the sun that warms it are “lizard-things”, just as the blade of grass is a “beetle-path” — given, but not as beings in the strict sense, for themselves (FCM198/292). It is as if an animal can only be an idealist, while the human is capable of realism, at least in the sense that it is able to posit the existence of something in itself beyond the appearances it presents to us.

⁴⁶ (FCM273/396) (cf. FCM273/396 & FCM243/353).

experience this only negatively, as other to the circle of the Same within which it remains confined.

Heidegger goes on to say that the mysteriousness of “the significance of this withholding”⁴⁷ reflects the fact that the analysis of animality is as yet incomplete and needs to be supplemented with an account of “motility” or “movedness”, which may perhaps be identified with what Heidegger describes as “the fundamental phenomenon of the life process [*Lebensprozesses*]”, and an account of death, which Heidegger describes as a *consequence* of this life process.⁴⁸ This is a significant point because Heidegger would be highly unlikely to say that life precedes death in the case of *man*. We can make sense of this statement if we propose that the mortality of the animal is a consequence of its openness to the mysterious outside.⁴⁹ Death would then be the most extreme penetration and shattering of the disinhibiting ring. This proposition might be justified by recalling the fact that the design of the ring is modelled upon the animal’s drives, which are ultimately instincts of *survival*. That which is most other to the animal’s experience, which can only be encountered negatively in the form of suffering, is death. And the animal’s inability to experience anything beyond the finite environment that fences it in might ultimately explain why animals do not know or anticipate death as such.

POETS AND SAINTS ON THE SUFFERING OF ANIMALS

According to Heidegger, the notion that animals are inherently and painfully deprived of being and death is proposed not by the science of biology (or zoology) but by poetry, and yet it is also a notion proper to the Saint (in this case, Paul). Hence it is ultimately

⁴⁷ (FCM273/396).

⁴⁸ (FCM273/396). What would happen if this addition were achieved? And what does its omission allow? This supplementation might at least turn Heidegger’s attention more forcefully towards the possibility of approaching the animal from a perspective other than that of *λόγος* and world — at least in the case of motility. In Chapter 2 of *Aristotle’s Metaphysics Θ 1–3* from 1931, Heidegger considers the division between those entities endowed with a soul (*ψυχή*) and those without, along with the division between those possessed of *λόγος* and those not, and even more generally “the division of beings into essential realms [*Bereiche*] [...] which we in philosophy have heretofore taken much too lightly” (*Aristotle’s Metaphysics Θ 1–3: On the Essence and Actuality of Force*. Trans. Walter Brogan and Peter Warnek. Bloomington: Indiana UP, 1995. *Aristoteles, Metaphysik Θ 1–3: Von Wesen und Wirklichkeit der Kraft* (GA 33). Frankfurt: Klostermann, 1990, 102/120). This text, among certain others on Aristotle, would provide some important indications as to how we might carry Heidegger’s analyses further.

⁴⁹ This would also explain at least one aspect of Heidegger’s famous distinction between the animal’s perishing (*Verenden*) and the human’s dying (*Sterben*) (BT291/247).

the combined result of a remarkable intrication of poetry, philosophy, science, and theology:

... we must *leave open the possibility* that the proper and explicit metaphysical understanding of the essence of world compels us to understand the animal's not-having of world as a *deprivation* [Entbehren] *after all*, and to discover *poverty* in the animal's specific manner of being as such [*in der Seinsart des Tieres als solchen ein Armsein*]. The fact that biology recognises nothing of the sort is no counter-argument against metaphysics. That perhaps only poets occasionally speak in this way is an argument that should not be allowed to cast metaphysics to the winds. In the end we do not first require the Christian faith in order to understand something of the saying of St. Paul (Romans VIII, 19) concerning the ἀποκαραδοκία τῆς κτίσεως, the yearning expectation of creatures and of creation, the paths of which, as the Book of Ezra IV, 7, 12 says, have become narrow, doleful [*traurig*], and weary in this aeon.⁵⁰

Poetry and theology, the former having bestowed upon man the λόγος which precisely endows him with a wealth superior to the animal, then seem to compound this apparently metaphysical gesture by hypostatising the animal's lack in a way that Heidegger had previously been warning against. This seems blithely to ignore the precaution of suggesting that this vision of the animal is solely a consequence of the deconstructive approach, which acknowledges that one ought not, yet cannot but speak of the animal negatively in relation to a certain human property. But, no: according to the poet and the Saint, the animal *really is* lacking.

POETRY, PHILOSOPHY, SCIENCE, THEOLOGY

Heidegger's entire lecture course is framed by the idea that poetry and art in general have access to a truth that the natural sciences do not,⁵¹ and indeed, more implicitly, by the notion that θεολογική as a reflection on beings as a whole has been usurped by physics, at least since the Enlightenment — in the figure of Kant — ruled out rational

⁵⁰ (FCM272–3/395–6, translation modified). It seems to me that Krell, in his extraordinary, pioneering analyses, fails to do justice to the difference between the discourses of philosophy, theology, and poetry, when he assimilates the poet to the philosopher Schelling, and indeed seems to assimilate the scriptural references to poetry (*Daimon Life*, 130–1). This seems pervasive in many readings of Heidegger's text. It is as if a reference to poetry and the words of saints was so ubiquitous in Heidegger's text that the immense gulf separating these genres could simply be passed over or elided altogether.

⁵¹ “[A]rt — which includes poetry [*Dichtung*] too — is the sister of philosophy and [...] all science is perhaps only a servant [*Dienstmann*] with respect to philosophy” (FCM5/7).

theology as a part of special metaphysics. In place of physics and theology, we now have physics alone. It is not surprising then that both poetry and theology should reappear in Heidegger's text, and it is not imprudent to suggest that, when they do, the moment is significant.

Heidegger's text (on metaphysics) begins with Novalis's idea of man's yearning to be at home everywhere, amidst the infinite totality of beings, the poet thereby supplying the sole *a priori* characteristic attributed to the human being. And while science places man among the animals, theology follows the lead of poetry and goes beyond what a strict immanentist naturalism would allow in affirming that there is in the animal a *real* lack. Theology reasserts the lack in the animal that poetry had suggested to philosophy by affirming the "word" as the defining feature of man.

In a lecture course devoted in so many ways to the excluded middle or "third way", which lies in-between like a hyphen, we find two non-philosophical disciplines circling around the broken and ungrounded twofold of philosophy and science: poetry on the one side, theology on the other, each usurped in history by their neighbours. This gives the following structure: Poetry—Philosophy—Science—Theology.

The contributions of poetry and theology are crucial in the rethinking of philosophy and science, and hence in grounding their onto-theological relation, since they draw them away from the pure transcendentalism and pure empiricism towards which they tend in the modern age.

THE RETURN TO NATURE

This rethinking involves a return to nature, but crucially it is not the nature of modern science. It is the nature of contemporary biology, seized upon by philosophy, and empowered in so doing by poetry and theology. If the turn to science allows Heidegger to say something of the origin of man in the sense of his emergence from nature, it is in terms of the Greek φύσις in all of its original ambiguity, which encompasses both natural things and the nature of things (their essence or being), and refers precisely to their blossoming into the light, literally and metaphorically. This ambiguity allows "nature" to be understood as the topic of *both* science and philosophy. But crucially this ambiguity has now begun to be *thought* in a way that it was not for the entire history of philosophy.

This "return to nature" is a return to beings as a whole which thinks the hyphenation of the bifurcated paths along which φύσις has deviated. Nature is historicised. It is viewed as a process of development from the ungrounded twofold of the beginning to the radically empiricistic picture of modern science, and even a little further beyond, to the twentieth century and a certain rethinking of foundations which

Heidegger finds in the more philosophical life sciences in particular, the beginning of the Heideggerian return to the fold of both science and philosophy.

Heidegger's nature is stratified according to the "levels of being" which may be identified within it. This stratification is arrived at by taking the Aristotelian hierarchy of vegetable, animal, and rational animal, and replacing it with a cruder and more vivid distinction between stone, animal, and man. This translation of Aristotle's thesis allows the beginning of philosophy to communicate across two millennia with the most contemporary of sciences, specifically biology. It allows philosophy to seize upon and disseminate the qualitative distinction which this incipiently philosophical science had begun to introduce within the ontological univocity which modern science had tended to attribute to nature in concert with a more generalised forgetting of being in philosophy and beyond.

One of the lessons we might take from Heidegger's lecture course is that we must rethink the sense of nature if our "naturalism" is to be worth anything, and that means returning to φύσις in light of the relation between contemporary science and the history of metaphysics, along with the fateful decision at its inception which led to the split between science and philosophy. But in doing so we must also bear in mind those other ineptual relations which philosophy entertains with poetry and theology.

The unthought hyphen of onto-theology is a hyphen between two senses of φύσις. The ontological difference opens up *within* nature.⁵² An ontology or a philosophy of nature might be the answer to the question of how we are to understand the hyphen that for so long went unthought.⁵³

CONCLUSION: DEAD-END?

In concluding, let us ask whether the way taken by Heidegger in this lecture course was a dead-end or not rather an overgrown path that should be cleared and followed anew in light of the problematics into which twenty-first century philosophy has entered and the impasses into which it has strayed.

Are we to read anything but contingency and want of time into the fact that the analysis of λόγος, with which *Fundamental Concepts of Metaphysics* closes, is truncated? If

⁵² It here becomes most apparent that our approach was decisively influenced by Michel Haar's exceptional *The Song of the Earth*. Trans. Reginald Lilly. Bloomington: Indiana UP, 1993 [1987].

⁵³ Padui argues that Heidegger refuses to acknowledge the possibility of a "non-reductive naturalism" and this is the reason why in the end he seems to abandon the path broached by *Fundamental Concepts of Metaphysics* and *Metaphysical Foundations of Logic*, "From the Facticity of Dasein to the Facticity of Nature", 51, 68f.

λόγος is the criterion and standpoint from which the retrospective and deconstructive analysis of the animal takes place, does this interruption have any relevance for the outcome of the analysis itself? Does the truncation of an aspect which to many readers may seem all too close to a metaphysical determination of the difference between man and animal, in conjunction with the avowedly incomplete account of animality in terms of motility, life and death, allow what is most original and progressive in Heidegger's text to be overwhelmed?⁵⁴

If this were so then it would, despite everything, leave Heidegger vulnerable to a certain deconstruction. In this regard, one might allude to the fact that, in the transition from animal to human, we witness an almost complete reversal in the ordering of certain crucial notions, including life and death, and actuality and possibility, which finds an important analogue in the analysis of language that one finds in *Being and Time*, where significations precede the actual words which come to be applied to them an order of precedence which is radically modified in the work of the later Heidegger.⁵⁵

Thus one might wonder if the *particular way* in which the transcendental aspects are worked out here is still too much in thrall to the concealed metaphysical aspects of Heidegger's earlier work. In the present case these would amount to an understanding of being as pure possibility, radically distinct from all actualisation, disconnected from actual beings, and not susceptible to their influence. The later Heidegger would consider this a failure properly to think the ontological difference, remaining, as it does, too close to the Platonic chasm between the ideal and the real.

Would this explain why Heidegger's experiments with empirical science were never repeated? Had Heidegger in 1929 not yet altogether freed his own conception of philosophy from the first horn of the dilemma in the relation between philosophy and science, pure transcendentalism? If so, this would have prevented him from allowing the empirical to enter philosophy in a satisfying way. It is as if the encounter with science came just a few years too soon.

Certainly this reading is encouraged by the fact that Heidegger later on chooses another, less empirical, or at least less scientifically empiricist way of deconstructing the ontological difference, which involves, on the one hand, an analysis of the event of differentiation itself (*Ereignis*) in terms of time-space (*Zeit-Raum*), and on the other hand, a certain kind of what might still be called empiricism, but an empiricism of the "thing", which is phenomenological and descriptive, attending in minute detail to

⁵⁴ Such certainly seems to be Krell's view (*Daimon Life*, 128), and Derrida's.

⁵⁵ "To significations, words accrue" (BT204/161) (cf. BT121/87).

singular entities, like the jug and the bridge, and indeed the poem. Neither of these aspects will ever again invoke the data of the natural sciences.⁵⁶

Something else that will have encouraged Heidegger to keep to this course is his apparently ever firmer conviction that to call upon the assistance of the sciences in the rethinking of φύσις risks falling back into the modern, mathematical understanding of nature. This is understandable given that the most dangerous tendency displayed by the sciences, even in 1929–30, was the forgetting of being. This means that Heidegger came more and more to retract his suggestion from 1929–30 that the sciences, at least in the form of contemporary biology, were indeed somewhat capable of thinking.⁵⁷ Indeed, it might even be said that Heidegger suffered an immediate allergic reaction to the sciences following a contact that was too intimate to be free of the risk of contagion, since the mid- to late 1930's would see Heidegger's most negative and critical attitude towards the sciences, which he primarily associates with technics, the machine and its calculations.⁵⁸

The uniqueness of Heidegger's conception of science in *Fundamental Concepts of Metaphysics* is not unconnected with the similarly unusual way in which the "forgetting of being" is understood at this stage in Heidegger's itinerary, as the ontological flattening of the different levels of being. This is a tendency which haunts his conception of science here, and what is peculiar about his stance is that this tendency towards univocity on the part of science is considered even more problematic than its tendency to think of the relation between man and nature in terms of a subject-object relation or, with more contemporary (quantum) science, still to mathematicise nature even if the subject-object opposition is undone.

And yet Heidegger reveals that science is also capable of *resisting* this tendency. In the transitional years of the *Fundamental Concepts of Metaphysics*, Heidegger has a more differentiated idea of the sciences than he appears to later on. This is perhaps due to

⁵⁶ At least the *empirical* sciences; there are still attempts to speak of theoretical physics and mathematics.

⁵⁷ Cf. "Science does not think [...], nonetheless science always and in its own fashion has to do with thinking [*mit dem Denken zu tun hat*]" (*What is Called Thinking?* Trans. J. Glenn Gray and Fred Wieck. New York: Harper & Row, 1968. *Was Heißt Denken?* (GA8) Frankfurt: Klostermann, 2002 [1951–2], 8/9).

⁵⁸ Winkler's analysis is similar at this point, as is the general thrust of his helpful reading of the relationship between philosophy and science in this course ("Heidegger and Man's Poverty in World", 531–3, esp. 533). In addition to this, biographically, one perhaps cannot discount the episode of the Freiburg rectorate of 1933–4, since this involved Heidegger in a grand ambition to organise the university in a way that would carefully coordinate philosophy with all of the other sciences. Perhaps the disappointment of this ambition and the compromise involved in pursuing it encouraged him to retreat from these forays beyond philosophy proper.

the influence of Max Scheler and certain of his fellow scholars in the Sciences at the University of Freiburg where he had recently taken up a position. In particular, he will have been induced in this way to investigate *biology*, a science which after this point seems to hold no interest for him, a fact which can hardly be said to characterise the rest of philosophy in the second half of the last century and the early years of the twenty-first. The special significance of biology for Heidegger lay in its resistance to physical reductionism and hence to the very univocity towards which the rest of the natural sciences seemed ineluctably drawn. The mere insistence on its existence as an independent branch of science and on life's *sui generis* nature by itself promotes the idea of a non-univocal plane of nature.

In light of Heidegger's refusal to return to this differentiated vision of the sciences, and in view of what philosophy has become today, we might venture to suggest that the path of thought which peters out towards the end of *Fundamental Concepts of Metaphysics* is one which might fruitfully be re-opened. The saint and the poet might still have something to say in the ongoing attempt to reconcile the philosophers and the scientists.

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