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Re-Enacting Natural Histories: Heidegger and Collingwood on the Historicity of Living Nature

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1. Historicity and Life

In the wake of the huge impact of life-philosophy in the late nineteenth and early twentieth centuries, two philosophers confronted a problem that seemed to mark a limit for their respective projects of finding a fundamentally hermeneutic basis for a certain kind of life, historical life, that makes possible any thought or discovery of life and nature itself and as a whole. Martin Heidegger and Robin George Collingwood independently arrived at this apparently insuperable limit to their basic philosophical orientations in the late twenties and early 1930's, coming at it through quite different trajectories and attempting divergent solutions. If, beyond purely methodological divisions between natural and human sciences, there is a historicity that makes any inquiry possible, then we still appear to reach a limit in our understanding of how this historicity can be in part constituted and disrupted by life-'worlds' of living beings that do not 'have' a history of their own. Developmental and evolutionary histories make life the subject matter of history and can be understood in and through the life that is fundamentally historical, but understanding if and when living nature is itself constitutive of historicity is far more problematic. Is it a limit that curtails and problematises the hermeneutic approach to thinking life itself, or a

necessary constitutional delimitation of that approach? Might it in the end be both, however unfathomable such a double limit would seem to be?

Heidegger claims that understanding life at this limit requires us to begin with historical life and then try to think it under the sign of privation, through a 'deconstruction' of the structures historical life. Yet this, or something that seems virtually indistinguishable from it, is the procedure that historical life must repeatedly apply to itself; it is the very re-enactment or retrieval that makes it historical. A number of commentators have suggested that historical life is perhaps not so clearly in full possession of its own historicity as Heidegger claims.[1] Perhaps the most significant reason for this is that historical life itself will turn out to have been made possible by its own disruption in repeated attempts to traverse 'worlds' that limit the historical world. Collingwood too reaches this limit in repeated attempts to traverse and go along with life processes that we can understand, but which refuse to disclose their own contribution to the possibility of that understanding. His trajectory, however, moves between incomplete attempts to establish methodological boundaries between the study of nature and history and the recognition that there is a historicity of life that can only be understood historically and yet seems to refuse historical understanding. Tracing these two trajectories to the point at which they meet and almost touch at the question of the historicity of life proves to be instructive. Both of these thinkers hit a dead end trying to understand living histories in terms of distinctions such as that between singular or general processes, subjects or objects of historical understanding and so forth. In the process their difficulties suggest ways in which future re-enactments of this question might find their way towards a life that both constitutes and disrupts the sense of its own history.

1 See e.g., Derrida, Jacques. *Of Spirit: Heidegger and the Question*, trans. by Bennington, G. and Bowlby, R. (Chicago, The University of Chicago Press: 1989), Farrell-Krell, David *Daimon Life: Heidegger and Life-Philosophy* (Bloomington, Indiana University Press: 1992); McNeill, William. *Visions: of Animals, Others and the Divine* (Centre for Research in Philosophy and Literature at The University of Warwick: Research Publication Series: 1993).

2. Heidegger and Collingwood on Historicity

To begin with it is necessary to establish that Collingwood's thinking of historicity is comparable to Heidegger's and that, despite the very different philosophical contexts within which they were working, they come to share an understanding of historicity that leads them to the limit problem I have identified. There are a number of points at which the two projects might seem to radically diverge, so will take these in turn.

i) Does Collingwood think historicity at all?

The most obvious objection to my proposed comparison would be the claim that Collingwood does not have a concept of historicity at all. In *Being and Time* Heidegger famously distinguishes between historicality or historicity [*Geschichlichkeit*] as a fundamental feature of Dasein's being from historiology or historiography [*Historie*], that is, history understood as bodies of knowledge together with the more or less scientific methods that generate those bodies of knowledge. Heidegger wants to show, firstly that history as a science is grounded in the fundamental historicity of Dasein and he does so by arguing that even before there can be any scientific problems here, e.g. problems of evidence and how to interpret it, the past must be 'open' to us, that is, 'the *way to it* must in general be *open* if we are to go back to it historiologically.'[2] The way to the past is open to us through the 'Dasein which has-been-there' and along with that, of course, the world which has-been-there for that Dasein.

Collingwood, on the other hand, might seem to be interested only in what makes historiological investigation properly scientific as opposed to proto-scientific, and not have any notion of the pre-scientific historicity which Heidegger claims to be the existential origin of historiological research. That most authorities led 'scissor and paste' histories through to scientific critical historical methodology would, in Heidegger's view, have its source in the historicity of Dasein. Furthermore, it is possible that the 'source' to be critically examined, the way in which the past is opened to us, might be made transparent in some proto-scientific historiology, whilst it gets side-lined or completely covered over in

2 Heidegger, M. *Being and Time*, trans. Macquarrie, J. and Robinson, E. (New York, Harper and Row: 1962), p.445. Hereafter *BT*.

scientific historical research. A claim such as the following would, in turn, most likely have horrified Collingwood: '[...] the existential idea of historiology is not given a higher justification by having the historian affirm that his factial behaviour is in agreement with it. Nor does the idea become "false" if he disputes any such agreement.'[3] Collingwood, as an historian, did see the factical behaviour of the historian of special importance in the attempt to make transparent what historical understanding involves. Nevertheless, it is not just as scientific researcher that a historian might be able to help us make our own historicity transparent, but as someone who reflects on what it is that makes such research possible, and Collingwood's understanding of history does give him a notion of historicity that is on a par with Heidegger's.

The core notion that informs both thinkers' grasp of the historicity that is the source of all historiology is what Collingwood calls 're-enactment' and Heidegger in *Being and Time* calls 'repetition', or 'retrieval' [*Wiederholung*]. In fact, when Heidegger first began to develop the notion in his lecture courses at the beginning of the 1920's, he calls the being of historicity 'enactment' of the historical situation.

The key to this notion is the thought that re-enactment is not simply the repetition of a thought or action, but the retrieval of the context of significance within which we can make sense of that thought or action. So, for example, in the winter Semester of 1920-21 in a lecture course entitled *Introduction to the Phenomenology of Religion* Heidegger puzzles over the difficulty of putting ourselves in a position where we can understand Paul's letter to the Thessolonians. The problem of 'empathy', of 'transporting oneself into the situation' does not budge at all, he claims, if it is grasped epistemologically: 'Empathy arises in factical life experience, that is to say, it involves an original-historical phenomenon that cannot be resolved without the phenomenon of *tradition* in the original sense.'[4] *Being and Time* later tells us that such a tradition is what Dasein 'hands down to itself' rather than simply takes

3 Heidegger, *BT*, p.445.

4 Heidegger, M. *The Phenomenology of Religious Life,* trans. Fritsch, M. and Gosetti-Ferencei, J.A. (Bloomington, Indiana University Press: 2004), p.59. Hereafter *IPR*.

over fully formed. The 'situation' of Paul and the Thessolonians is not some domain of things that we need first of all to come to know about. Any such coming to know about a situation is based on enacting the directional-sense of a factical life:

> 'Situation' is thus for us something that belongs to understanding in the manner of enactment, it does not designate something in the manner of order. A diversity of situations or also within a situation should not be grasped as a complex of order. A situational series is not, moreover, a series in the manner of an order (compare to Bergson's 'durée concrète').[5]

Later in the same text, responding to the charge that all he has done is say the situation is dynamic and changing rather than static, which was obvious from the start, Heidegger continues: 'The time of factical life is to be gained from the complex enactment of factical life itself, and from there the static or dynamic character of the situation is to be determined.'[6] The situation was something enacted in the factical life of those who lived in the past, not something which they simply faced or were carried along by. The most fundamental thing to be brought about if we are to fulfil what is usually described as the desire to 'transport' ourselves into the past or 'empathise' with historical figures, is thus, once more, the enactment of that situation.

It is along these lines, I suggest, that we can best understanding Collingwood's most famous thesis concerning history, that 'All history is re-enactment'. Re-enactment is his insight into the retrieval by which historical Dasein enacts a situation in its factical life. If Collingwood is understood in this way, then objections to his thesis, which point out that it is not an apt description of the total behaviour of historians as historians, that they do not only sit around trying to imagine themselves into the minds of historical agents, fall away. It is 're-enactment' that is our very openness to the past, that gives sense to anything which the historian might engage in, whether or not it is the sort of activity we would usually describe as imagining oneself into the past. So, to take one of Collingwood's favourite examples, in the case of Caesar crossing the

5 Heidegger, *IPR*, p.63.

6 Ibid., p.64.

Rubicon, we understand nothing of the situation if we understand it as a series of bodily movements. Such a view is the view 'from the outside' as he sometimes misleadingly puts it. What is involved in re-enacting the crossing of the Rubicon and thus coming to an understanding of the event 'from the inside', is the hermeneutic work of enacting the factical life situation of Caesar. Clearly there is no sense to the rubicon event if we do not understand Roman law and custom stating that no Roman general was to cross that river with his armies thus entering Italy proper. Yet more fundamentally than that, there is no true historical sense to that piece of knowledge if it is not uncovered as part of an enactment of the situation, the contexture of factical life. One never reaches a point at which the re-enactment has taken place, and all the rest is just filling in the gaps. The so-called 'outside' of an historical event is not ultimately opposed to the 'inside', but is only the ontic trace left by the ontological opening up of the past in the re-enactment of its 'inside'.

A further objection to my contention that Collingwood and Heidegger have essentially got the same phenomenon in view, would be to point out that Collingwood insists that history is always concerned with the past, whilst Heidegger's conception of historicity is notoriously wedded to the future. It is with an eye to the future that, in a moment of vision, Dasein can properly retrieve the past, re-enacting it in its possibilities. Is there anything like that in Collingwood's account of history as re-enactment? It turns out that something like it comes into view in his attempt to grapple with the idea of progress. Progress, for Collingwood, is something which belongs to the situation as it is re-enacted, it is never something superimposed on the situation, nor something that could be used to measure situations, historical events and actions, against one another. Each has its own progress and in coming to understand the past by re-enacting its situation we come to see its own sense of progress, its own horizon of possibilities. From its own horizon of possibility, according to Heidegger, retrieval makes possible a 'reciprocal rejoinder' with the possibilities of the past situation. We thus come to see what progress was for the past, in the light of our own progress. When Heidegger says that 'Repetition does not abandon itself to that which is past, nor does it aim at progress,'[7] the notion of progress that he has in mind is one that would cover the past, allowing us to say that, as compared to the past, 'we have

7 Heidegger, *BT,* p.438.

progressed'. Collingwood's notion of progress as a necessary component of situational enactment actually brings him to a somewhat indirect recognition of the primacy of the future.

ii) 'Metaphysics without ontology?'

If we step back for a moment from the problem of historicity as such, it will be possible to see that there is fundamental agreement between Collingwood and Heidegger about the nature of philosophical inquiry, agreement that grounds their respective treatments of historicity.

The best place to see this is in Collingwood's 1938 work *An Essay on Metaphysics*. At first sight it seems that once more the basic thrust of the argument is quite opposed to Heidegger's. Collingwood argues for a 'metaphysics without ontology'. What could be further from Heidegger, who tried, we are told, to destructure the 'metaphysics of presence' by grounding a fundamental ontology? This, however, turns out to be a terminological difference that conceals deep agreement.

Collingwood begins his essay on metaphysics by identifying and separating out two main strands of thought in Aristotle's understanding of metaphysics: the first is an attempt to establish a 'science of pure being', the second is establish a science which attempts to reach the ultimate ground of all other sciences, the 'presuppositions' which underlie ordinary science. Now according to Collingwood there is no such thing as a science of 'pure being'. The very idea rests on a mistake, which is that of carrying the process of ordering sciences in terms of the abstractness of their universals one step too far. 'Pure being', is not only the most abstract of all universals, it is a universal from which everything has been abstracted.

In line with this thought, what we find at the beginning of *Being and Time,* as in the lectures throughout the 1920's, is Heidegger bringing into question the idea that Being is the most abstract universal, that it is empty and yet obvious in such a way as to require no question to be raised about it. This is precisely because 'pure being' is thought as that which is reached at the end of an ordered process of abstraction in

contrast to a formalisation that does not abstract, but rather concretises the directions of sense from situations. What Heidegger does is to steer a path towards the investigation of the most radical 'presuppositions' of ordinary science, or indeed any science at all. This is Collingwood's second strand, the investigation that he thinks makes up metaphysics proper, which Heidegger calls fundamental ontology.

The key to understanding the proximity of the two thinkers on this point is to be found in Collingwood's elaboration of what he means by presupposing and above all what he means when he speaks of an 'absolute presupposition'. If, as his notion of a 'logic of question and answer' entails, every statement that anyone ever makes is made in answer to a question, then every question itself involves a presupposition, usually a whole complex of presuppositions. A supposition need not be a consciously held belief. The logical efficacy of a supposition does not depend upon its truth or even upon it being believed to be true but only on its being supposed. In this way Collingwood draws a distinction between relative and absolute presuppositions. Relative presuppositions are related to a question that can be asked on the basis of supposing it, and act as the presupposition for asking that question. They are also relative to another prior question as the answer to that question. An absolute presupposition is defined as follows: 'An absolute presupposition is one which stands, relatively to all questions to which it is related, as a presupposition and, never as an answer.'[8] In other words, they form the fundament of all question asking. We can question about absolute presuppositions, and that is the activity of metaphysical inquiry, but there are no questions which need to be answered or could be answered in the course of everyday inquiry or ordinary science that lead us to absolute presuppositions as an answer. Absolute presuppositions are never an answer, but every answer, every statement or proposition, gains its meaning only as the answer to a question. That leads Collingwood to the peculiar but crucial conclusion that absolute presuppositions are not propositions.

The conclusion that absolute presuppositions are not and cannot be propositions is peculiar, since it leaves us with the problem of how to

8 Collingwood, R.G. *An Essay on Metaphysics*, (Oxford, Oxford University Press: 1998), p.31. Hereafter *EM*.

understand what metaphysical inquiry is aiming at. Does it not aim at bringing absolute presuppositions to light? And to do so, must it not aim at stating what they are, at propounding them? Collingwood's response is to say that the metaphysician does not try to propound absolute presuppositions, 'but to propound the proposition that this or that one of them is presupposed.'[9] One might think that in order to do that the propositions of the metaphysician would have to contain clauses, which, if extracted and propounded in their own right would allow us to propound absolute presuppositions in the form of propositions. That we could do something like that cannot be disputed, but Collingwood insists that it does not amount to propounding absolute presuppositions as propositions because the propositions thus arrived at would not themselves be the ground of sense or the 'sense-directions' that are thus indicated. Absolute presuppositions cannot be propounded, but only formally indicated.

At the beginning of the chapter 'On Presupposing' in *An Essay on Metaphysics,* Collingwood comes extremely close to a phenomenological description of what Heidegger calls the 'worldhood of the world', as the inhabitants of which we deal with the significance of useful things, that only arise as such in moments of disuse:

> I write these lines sitting on the deck of a ship. I lift my eyes to see a piece of string- a line, I must call it at sea- stretched more or less horizonatally above me. I find myself thinking 'that is a clothes-line', meaning that it was put there to hang washing on. When I decide that it was put there for that purpose I am presupposing that it was put there for some purpose.[10]

In Heidegger's hands such an experience would be made to indicate that the presupposition here is the absolute presupposition of sense, the referential whole of involvements that make up the worldhood of the world. Admittedly, Collingwood does not engage in anything like the intricate analysis of the structures of care that Heidegger finds at the basis of something having the character of 'in-order-to', but it seems to me that by far the best way of trying to understand what Collingwood is getting at here is by bringing into play Heidegger's concept of world.

9 *EM*, p.33.
10 *EM*, p.21.

Not only are there important parallels between *Being and Time* and *An Essay on Metaphysics*, but Collingwood, in only a few pages, goes on to sketch out directions for going further than Heidegger took up after *Being and Time*. He argues that metaphysics is necessarily historical, because absolute presuppositions are themselves historical. The world is not only historical in the sense that historicity belongs to our own worldhood, but that worldhood itself has a history. Absolute presuppositions change, but they are not subject to wilful or arbitrary change. Like other historical facts, they are never singular, but take the form of a gathered multiplicity. Absolute presuppositions come in the form of 'constellations.'[11] So the absolute presuppositions that constitute a world are not bound together by some extra element, nor do they fit together like pieces of a jigsaw or links in a chain, they are gathered constellations, the kind of unification of multiplicity which the later Heidegger understood as the primary meaning of the world *logos*.

3. Collingwood's attempts to distinguish natural sciences from historical sciences

Having established the sense of historicity that Heidegger and Collingwood share, we can return to the question that raised at the start about the historicality of nature and finally of limits to following the sense-directions that traverse of life-worlds.

i) Collingwood's 1st distinction: General and actual narrative. Natural process and historicity.

Collingwood's primary concern when it comes to the matter of the historicality of nature is usually to distinguish historical inquiry from natural science. Some of his attempts to do this are more successful than others, sometimes blocking off and sometimes opening up the question of whether nature has its own historicity.

One of his earlier attempts to distinguish natural processes from history was in terms of general and actual narrative. So, in a lecture entitled

11 Collingwood, *EM*, p.66.

'Outlines of a Philosophy of History' from 1928 he gives the following account:

> The birth of the solar systems, the origins of life on our planet, the early course of geological history- all these are not strictly historical studies because the historian can never really get inside them, actualise them in his mind: they are science not history, because, however much they take the form of narrative, they are generalized narratives, accounts of how things must have happened in any world, not accounts of how things actually happened in this world. They are hypotheses, which, however probable, do not even approximate to the status of documented history.[12]

The first point is the one that Collingwood will usually stick to, that narratives about the course of natural events do not primarily involve 're-enactment'. Nevertheless, they must be derivative upon re-enactment if my interpretation is correct. The following points seem to be quite confused. If there is a distinction to be made between generalised and actual narratives, surely certain branches of natural science involve 'filling in' general narrative such that they follow the actual course of events and reciprocally, deriving general narrative structures from the actual course of events. The final sentence is even more peculiar, since it at once suggests that what is distinctive about natural science is its 'hypothetical' status and contrasts this to documented history, but leaves it completely unclear why should be the crucial distinguishing feature. Surely the distinction is not supposed to be one simply between the relative certainty of one kind of narrative as compared to the other. This would be highly implausible. Are we to suppose that those hypotheses of historians can be proven to be correct in a way not open to, say, geological science? There seems no basis for the appeal to 'documented history' since it is in this very lecture that Collingwood goes on to claim that archaeology destroys the special status of documented history and forces us to re-evaluate the status of documents themselves, so that they become just a particular instance of evidence which needs to be interpreted.

12 Collingwood, R.G. *The Idea of History,* rev. edn. (Oxford, Oxford University Press: 1993), p.445. Hereafter *IH.*

Later, in *An Autobiography* Collingwood will explicitly contrast the stratigraphical methods of geology and archaeology.[13] Although superficially similar, he claims once more that the difference between the two is of vital importance. This is apparently because items found in an archaeological dig can only be used as evidence if we can understand what they are for, or better, if we can see them as being for something, even if we do not yet understand what it is. Clearly not everything that can be found in an archaeological dig is a tool with a purpose in the usual sense, but it must be equipmental, in the Heideggerian extended sense, in order for it to be evidence which can be understood and which requires interpretation. For example, the analysis of pollen can be vital archaeological evidence. It does not tell us about tools in the usual sense, but it can be made to tell us about the vegetation that featured in the equipmental whole of a world that has been. Now for Heidegger, and I think also ultimately for Collingwood, what is found in a geological survey becomes, as such, something within-a-world, the world of the geologist. Nevertheless, items of archaeological evidence are supposed to carry their worldhood with them in a way that allows us re-enact or retrieve a world. Without that there is only what is uncovered as the past of our own world, or so it would seem if life that traverses these historical worlds as they are re-enacted, the life of the pollinating plants and the animals that feed upon them, are utterly devoid of historicity.

ii) From event and action to the singularities in the natural world

At other points Collingwood is willing to consider the possibility that nature has its own historicity. He writes no less than three conclusions to a series of lectures published as *The Idea of Nature*, which argue that the history of the idea of nature should be divided into three fundamental phases, the ancient thinking of nature which saw nature as fundamentally organism; what he calls the 'renaissance' idea or early modern thought of nature as mechanism and then the modern idea of nature, that he finds in readings of Bergson, Whitehead and Samuel Alexander. The modern idea of nature is 'nature as history'. Although convinced that we must now see nature as a process, Collingwood is unsure how much credence should be given to the idea that this is fundamentally something like history, precisely because history proper has historicity as re-enactment at its

13 Collingwood, R.G. *An Autobiography* (Oxford, Oxford University Press: 1939) p.108.

core. In one of the conclusions to *The Idea of Nature* lectures known as the 'cosmological conclusion' he describes in some detail a process which at every stage becomes more 'internal', so that the inner/outer metaphor that he uses to describe the prerequisite of historical understanding becomes the final point in a continual 'internalisation' in nature. We have seen that this metaphorical configuration tends only to obscure Collingwood's insights into historical hermeneutics, which does not aim at some final inside, but at the world of a being that is always outside of itself. Nevertheless, this hint at a continuity between natural and historical processes is interesting, even if it simply tends to repeat a developmental narrative that will be put into question my a more pervasive traversal of the historical world by living beings. In the other conclusions to the nature lectures we find Collingwood claiming that a more complete understanding of the idea of history itself will allow us to judge more precisely whether the duration or process of modern philosophies of nature really points towards something that can properly be called the historicity of nature. When we do get that further elaboration of the idea of history, in the lecture courses published as *The Idea of History* and in his recently re-discovered unfinished manuscript *The Principles of History* we find little more than a reiteration of the claim that there is a difference in kind between history and natural process. There are processes that can be made sense of because they are within the world of a scientist and there are processes which bring their own world with them. In *The Idea of History* this difference is framed as one between events and actions:

> [..] it remains true that the process of nature is different from the process of history- that, for example, the succession of geological periods is not a truly historical succession- because it is peculiar to history that the historian re-enacts in his own mind the thoughts and motives of the agents whose actions he is narrating, and no succession of events is an historical succession unless it consists of acts whose motives can, in principle at least, be thus re-enacted. Geology presents us with a series of events, but history is not history unless it presents us with a series of acts.[14]

14 Collingwood, *IH*, p.115.

In the *Principles of History* we find a more detailed argument along these lines. The main thrust of this argument is against what Collingwood calls 'Historical Naturalism', understood as an ill-fated attempt to make history scientific by applying the methods of natural science. He shows complete disdain for any attempt to ground history in a 'science of human nature', which can only ever end up saying that human beings do what they do. There is more to be gained from the thought that nature has a role to play in history as environment. However, this idea is misconceived if we say that nature 'influences' history as environment. The nature that shows up in the environment, that has a place in history, is not nature 'as it actually and indefeasibly is' or 'nature in itself', but only ever something that is already part of the historical world of the human being. Collingwood problematically tends to frame this in terms of the beliefs, whether true or false, which people have about a situation, including what we generally call natural in an environment. It is not purely in terms of my beliefs about it that nature enters into my historical situation. If, however, he had returned to his account of an environing world, which I have argued is latent in his thinking of absolute presuppositions, then this thought becomes more plausible. It is the whole constituting configurations of sense-directions, and not just my set of beliefs, that allows nature to traverse the historical world. There is then a sense in which 'the influence of nature on history' is an influence of history upon history.'[15]

The account given in *Being and Time* of the historicality of beings within-the-world and Collingwood's last accounts of nature as it appears in history are very close to one another. Nature has its own historicality, it is not lent a history by association, but the source of that historicality is the historicity of the human environing world. The question of whether nature has its own historicity is dealt with at greatest length by Collingwood in his 1935 paper 'History and Reality', written between the lectures on *The Idea of Nature* and those on *The Idea of History*. Heidegger tackles this problem at length in the well known 1929/30 lectures on *The Fundamental Concepts of Metaphysics*.

15 Collingwood, R.G. *The Principles of History* (Oxford, Oxford University Press: 1999), p.109. Hereafter *PH*.

In 'History and Reality' Collingwood sets out see just how far he finds himself able to go along with Samuel Alexander's claim that there is a 'historicity of things', that reality is at bottom historical. Here he rejects the idea which had grounded his own general narrative/actual narrative distinction between the objects of natural sciences and of historical sciences, arguing that in the last resort all processes in time have a singularity like that belonging to historical events:

> The dandelion-head whose seeds I now watch a sparrow eating is as individual and unique a thing as the French Revolution. The sparrow is this sparrow, not any sparrow. Its appetite for the seed I now see it eating is, no doubt, an example of a kind of appetite common to sparrows; but if I cannot be content to say that the French Revolution happened because oppressed populations rebel against rulers too weak to control them, I cannot be content to say that this sparrow eats this seed because sparrows like dandelion-seeds. In both cases, the ground of my discontent is the same: it is, that the general rule, just because it explains every case of the kind indifferently, does not explain this case in its concrete actuality, but only those features of it in which it resembles the rest.[16]

We can take it that an evolutionary explanation for the dandelion-seed eating, that obviously goes much further than what is offered here, will not alleviate the main concern, which is that the singularity of this event is necessity lost in explanation. Collingwood here move towards the idea of what Heidegger will later call the 'singular, unique and simple' which science as such cannot encounter.

The principle of historical understanding is in its widest sense, Collingwood claims here, that the flux of things in itself, as it actually flows, is intelligible. It is intelligible only if it is exhibited in its continuity, like understanding a piece of music or a literary work. Such an understanding is, Collingwood claims, what Bergson meant by intuition. It is not only distinct from the kind of intelligibility that we get from general explanatory laws, it is the ground of that intelligibility. If a

16 Collingwood, R.G. 'Reality and History', published in Collingwood, R.G. *The Principles of History* (Oxford, Oxford University Press: 1999), p.181. Hereafter *RH*.

flux in time were not intelligible in itself it could not be made so by being subsumed under a general law. That historical understanding must also involve the awareness of discontinuity, breaks and leaps, is something that does not come to the fore here, although the essay does later emphasise that history is all about beginnings, about something beginning which has not been before.

There is, in any case, a depth to the historicity of nature which is not simply the historicity of its showing up within-a-world. 'History and Reality' tries to indicate what it is: it is not mere change, it is a creative process, and also something in which there can be beginnings and new orders of existence. Natural beings also have their own time, a 'specious present', a time which allows them to gain their own character, for an electron very short, for an atom longer, for a molecule and an organism still longer.[17] Ultimately none of these indications as to what the historicity of nature amounts to are really satisfactory, but Collingwood senses that there is a problem here that the historicality of nature as it shows up in a world does not deal with. On the other hand, what he has to say about the time that human beings inhabit as 'properly' historical beings is also illuminating, and once more takes on quite a Heideggerian tone: The freedom of human actions is to be found in the character we gain in our fundamental temporality. For Heidegger, Dasein's temporality is a stretching itself along, between life and death, but also in each of its experiences between life and death. It also gathers all of the *ekstases* of time in a moment of vision, not an empty now point that somehow needs to be connected back to a series of empty nows, but the whole of its existence as temporalising, fulfilled in a moment. Collingwood remains focused on the past, but ends up with much the same thought. A free act, if we are to avoid abstract libertarianism, must be essentially historical: 'History is this gathering-up of the whole past into the present, as determining that novelty which the present, by thus being itself, creates.'[18] The question remains, does the concrete singularity of natural time show up within such stretches of historical time without fundamentally disrupting and breaking up their continuity? And is it not such disruption, from the life-worlds that traverse the historical world, that actually allow the historical world to repeatedly begin again, to stretch itself out from future possibilities that are constituted in out going

17 Collingwood, *RH*, p.205.
18 Ibid., p.204.

along with living beings like the sparrow, that are not only unfolding singular events, but doing so in a way that exposes the historical world to the sense-making enactment of living beings and they intersect through the sense they make of one another.

4. Heidegger's attempts to think process and motility

Did Heidegger himself have any more success in his characterising the historicity of living nature? In the *Fundamental Concepts of Metaphysics* (1929/30) the question arises in the course of a phenomenological investigation of what he usually calls 'animal' environments, although it is all living organisms that he has in mind. The character of those environments is indicated by the concept of 'captivation'. His intricate and detailed teasing out of the idea of animal environments, as 'disinhibiting-rings' that the organism draws around itself in a way that keeps its powers from dissipating and forms the unity of its body, remains incomplete or rather is essentially lacking, he tells us, because: 'All life is not simply organism but is just as essentially process, thus formally speaking motion [*Bewegung*].'[19] There are a number of ways in which this motion is not to be characterised. So it is in no way a sequence of unfolding events' [*Abfolge von Ablaufen*], although it is always possible to treat the processes of life in that way. The concept of 'development' also has to be treated with suspicion and here Heidegger cites Hans Spemann's investigations in 'embryonic induction' as setting the problem of the particular kind of occurrence involved in the organisation of the organism. Is this then a purely negative characterisation of the notion of motility?

Upon closer inspection it turns out that it is not quite true that Heidegger's characterisation of environing-rings leaves aside the question of motility completely, since in the description of what the unity of such rings actually amounts to he has already said that it has the structure of a capacity as a movement towards, which is a movement away from itself in which the organism *retains itself* and does to utterly disperse in the activation of all of its powers. In that retaining it doesn't

19 Heidegger, M. *The Fundamental Concepts of Metaphysics,* trans. William McNeill and Nicholas Walker (Bloomington, Indiana University Press: 1995), p.265. Hereafter *FCM.*

just keep hold of its unity, it gives itself its unity for the first time.[20] Never completely actualised in its capacities, the living being is capable and in remaining capable it remains alive.

In the attempt at self criticism, the concern about motility resolves itself into the claim that death is something that is intimately bound up with the motility of life and so the motility of life has to be unfolded in relation to death. In captivation, which absorbs living beings, determinate possibilities for approaching death are prefigured. So death is not just the point at which life stops. Heidegger then reintroduces the distinction made in *Being and Time* between the dying of a human being and the coming to an end of living beings.

Commentators such as Will McNeill are happy to say on this basis that there is some kind of temporality of living nature, but that it is distinguished from the temporality of Dasein in that it is ahistorical: 'With regard to the time of life, one can thus say that whereas the animal, in its radical openness, is refused the possibility of any return to its own having-been in the presence of others, that is the *refusal* with which the animal shows itself to us in its specific otherness, and the animal is refused any active participation in the temporality of the world as such.'[21] However, where Heidegger actually does raise a series of questions about the possibility of speaking of a history of the living being, it comes along with a new concern that highlights precisely its having been along with others in some crucial way, since he asks:

> What kind of history does the animal kind, the species, possess? The species is by no means simply a logical schema under which the actual and possible particular individuals are subsumed. The *species-character* is rather essential to the character of *living things*...Through its belonging to the species, the encirclement of the individual animal is not merely extended further than it would be if the animal were simply individuated, but the species as such is thereby better protected and better equipped in relation to its environment. What sort of history then does the species possess and what sort of history does the animal realm as a whole possess? Can we and should we speak of history at all where the being of the animal is concerned?[22]

Clearly, Heidegger does not think that the individual is the only 'unit of selection' nor that species-character is only a categorisation of convenience when in reality we only find individuals with variations. Beyond that there is little more indication of how we are to proceed.

What is really required is a return to the concept motility as a basic directionality of sense that in enacted in Dasein's factical life. That enactment in turn needs to be understood as constantly traversed, entwined and involved in the constitution of the environments of living beings. Collingwood is left with the singularity of a sparrow eating dandelion seeds, but no way to say anything further about this because it is removed from the enactment sense. Heidegger repeatedly questions the possibility of traversing and understanding living environments, but he too fails to emphasis the way in which the world itself is enacted by such a traversal and that living beings do not only have an historically within the world, but are co-constitutive of the enactments of sense that allow for the historical forming of a world.

20 Heidegger, *FCM*, p.235.

21 McNeill, W, *The Time of Life: Heidegger and Ēthos* (Albany, State University of New York Press: 2006), p.48.

22 Heidegger, *FCM*, pp.265-266.

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Dilthey and Carnap: Empiricism, Life-Philosophy, and Overcoming Metaphysics

ERIC S. NELSON

1. Introduction

This paper is an attempt to reinterpret the early Rudolf Carnap's empiricism by considering its often underappreciated life-philosophical dimensions. After briefly discussing the Vienna Circle's social-political context in 'Red Vienna,' I turn to the significance of 'life-philosophy' for Carnap's early project. Dilthey's advocacy of empirical scientific inquiry and critique of traditional metaphysics as an indemonstrable and unjustifiable attitude rooted in a 'feeling of life' and interpretively (affectively-practically) articulated as a 'worldview' was adopted, via Dilthey's student and Carnap's teacher and friend Hermann Nohl, by Carnap and the early Vienna Circle in its manifesto announcing the task of overcoming [*Überwindung*] metaphysics and defending the scientific life-attitude [*Lebenseinstellung*] and lifestance [*Lebenshaltung*] against its spiritualist and authoritarian detractors.

'*Lebensphilosophie*' no doubt often played a reactionary role in Germanic culture in authors such as Oswald Spengler, whose work Neurath critically confronted for the sake of a scientific culture and socialist political life in his *Anti-Spengler*.[1] Dilthey has been erroneously

1 Neurath, O. *Anti-Spengler* (München, G.D.W. Callwey: 1921). Otto Neurath exposed Spengler's vulgar reading of Dilthey, Nietzsche, and Scheler while still identifying these authors with 'irrational life-philosophy' in *Anti-Spengler*.

associated at times with the 'irrationalist' romantic reaction against the Enlightenment. But Dilthey's works reveal a progressive positivist dimension—which was condemned by Martin Heidegger and Gadamer, 'to cultivate the spirit of Count Yorck von Wartenburg,' and defended by Georg Misch in *Life-Philosophy and Phenomenology* (1930)—and a proponent of the Enlightenment, modern science, and their educational importance.[2] 'Life-philosophy' was not straightforwardly culturally conservative and politically reactionary, as the feeling of life, life as expression [*Ausdruck*] and art, worldview, and lifestance were critically mobilized against traditional authorities, beliefs, and institutions in order to prioritize lived experience [*Erlebnis*] and scientifically comprehended experience [*Erfahrung*] and to promote a more critical and experimental scientific and artistic spirit.

In this context of the anti-metaphysical life-philosophical recovery of experience, Dilthey prioritised '*Erlebnis*' [lived-experience] over '*Erfahrung*' [impersonal experience]. *Erlebnis* is the first-person phenomenal givenness of the lived-experience of a self, which is not exclusively intellectual due to facticity and resistance, and *Erfahrung* is the third-person neutral givenness of a subjectless experience, which is primarily representational and cognitive. It is revealing that the Carnap uses the language of *Erlebnis* in preference to *Erfahrung* in *The Logical Construction of the World*[3] (1928) and related writings. Elementary 'lived-experiences' have a relational gestalt character in contrast to being separable foundational units of sensually experienced elements. Carnap's usage of 'phenomenon' in the 1920's is closer to Dilthey and Husserl than it is to the atomistic sense-data of Ernst Mach, Bertrand Russell, or his own later position.[4]

2 Gadamer, H.-G. *Hermeneutik in Rückblick* (Tübingen, Mohr Siebeck: 1995), pp. 9, 186 (Hereafter *HR*); Misch, G. *Lebensphilosophie und Phänomenologie. Eine Auseinandersetzung der Dilthey'schen Richtung mit Heidegger und Husserl* (Bonn, Verlag Cohen: 1930).

3 Carnap, R. *Der logische Aufbau der Welt*, (Hamburg: Meiner: 1967). Translation: Carnap, R. *The Logical Structure of the World; Pseudoproblems in Philosophy* (Berkeley, University of California Press: 1998).

4 Underscoring its Husserlian context, Rosado Haddock translates Erlebnis as 'experiences of consciousness.' Carnap's use of Erlebnis, and the procedural 'methodological solipsism'—an expression adopted from the neovitalist Hans Driesch—of The Logical Construction of the World that echoes the

Carnap adopted elements of Dilthey's critique of metaphysics. It is a discourse that lacks cognitive validity; its positivist, logicist, and 'life-philosophical' arguments combine to demonstrate its cognitive senselessness. Carnap's sensitivity to a logic of the singular and the cultural during the 1920's in the context of affirmative references to Dilthey sheds a different light on his thought. These threads indicate the possibility of articulating Carnap's early project as a logical empiricist hermeneutical art—albeit one which is incompatible with its standard interpretations—committed to interpreting meaning. As opposed to being the simplistic and one-dimensional reductionism suggested in caricatures of his thought, Carnap's project belongs to the larger task of pragmatic formation, cultivation, and education [*Bildung*] that would further life by clarifying it. In the conclusion, I contrast Carnap's logical empiricism with Dilthey's historically-oriented empiricism and the Vienna Circle's program of unifying science through physicalism with Dilthey's scientific and historical pluralism.

2. The Cultural and Political Contexts of the Early Vienna Circle

'Positivism' refers to a shifting, diverse, and contested group of philosophical and scientific tendencies that are generally concerned with the advancement of scientific inquiry and making philosophy scientific. This diversity of orientations, contexts, and arguments also applies to Viennese logical positivism, which had developed around Moritz Schlick, could be phenomenalist (early Carnap), empirical realist (Schlick), or physicalist (Neurath and Carnap), and whose members and associates were more widely informed by and engaged in the context of early twentieth-century European thought than is typically acknowledged in their Anglo-American and analytic reception that tends to bracket this context as merely cultural and social-historical rather than of philosophical concern.[5]

phenomenological reduction, is also indebted to Husserl; see Rosado Haddock, G. E. *The Young Carnap's Unknown Master: Husserl's Influence on Der Raum and Der logische Aufbau der Welt* (Aldershot, Ashgate: 2008), pp. 49, 55. In the second preface to *Logical Construction* from 1961, Carnap states he would use 'ground elements' (something similar to Mach's sense-data) instead of 'elementary lived-experiences' (Carnap, *The Logical Structure of the World*, p. xix; 1967: p. vii).

An early instance of this acultural, ahistorical, and depoliticized reception is the work of A. J. Ayer, which the history of early analytical philosophy has problematized by providing a more nuanced and complex picture. After studying in Vienna, Ayer imported the Vienna Circle's radical critique of metaphysics through his *Language, Truth, and Logic.*[6] Ayer's narrative, which became the dominant one, deemphasized the pedagogical-vocational and social-political orientation that significantly formed and shaped the Circle's critique.[7] Thus, the standard dominant view of the last century depicts the Vienna Circle as primarily pursuing a synthesis of Austro-British empiricism and the new formal logic while ignoring issues of culture, history, and politics as well as engagement with other varieties of philosophical discourse.

This story was already normative in 'continental philosophy'—whose major figures from Heidegger to Derrida, Gadamer, and Habermas were antagonistic to empiricism—and became the dominant one within 'analytic philosophy' due to the influence of Kuhn, the later Wittgenstein, and Quine. This decontextualized narrative is problematic. In some sense it is well-known that logical positivism emerged in a milieu dominated by the decline of Neo-Kantianism and the emergence of new philosophical movements from Husserl's phenomenology to the critical theory of the Frankfurt School. Recent scholars of early analytic philosophy have pursued this historical nexus further by reconsidering the Vienna Circle's sources, writings, and import, revealing how the differences within the Vienna Circle and the philosophical and social contexts of these figures are more multifaceted.[8]

5 For instance, Michael Friedman, Gottfried Gabriel, and Thomas Uebel; see Friedman, M. *A Parting of the Ways: Carnap, Cassirer, and Heidegger.* (Chicago, Open Court: 2000), p. 15; Gabriel, G. 'Introduction: Carnap Brought Home' in Awodey, S. and Klein, C. *Carnap Brought Home: The View from Jena* (Chicago, Open Court: 2004), pp. 3-20.

6 Ayer, A. J. *Language, Truth, and Logic* (New York, Dover: 1952)

7 Ayer 1952. Ayer further codified this 'standard view' with his 1959 anthology *Logical Positivism.*

8 Friedman, *A Parting of the Ways*; Gabriel, 'Introduction: Carnap Brought Home'; Uebel, T. 'Carnap, the Left Vienna Circle, and Neopositivist Antimetaphysics,' in Awodey and Klein, 2004: pp. 247–277; Uebel, T. 'Education, Enlightenment and Positivism: The Vienna Circle's Scientific World-Conception Revisited,' in *Science and Education*, 13:1-2: pp. 41-66.

The standard view did not emerge in Austria but retrospectively in the United States and Great Britain of the cold war. After the rise of National Socialism, the murder of Schlick, Carnap and others found themselves in American exile. Under the scrutiny of the FBI and conservative American intellectuals, they deemphasized the cultural, pedagogical, and political aspects that crucially defined their earlier project.[9] Figures associated with the Vienna Circle (Carnap, Herbert Feigl, Philipp Frank, Hans Hahn, Otto Neurath, and Edgar Zilsel) supported democratic socialist political and pedagogical activities. Even the more moderate and cautious 'right-wing' (Schlick, Friedrich Waismann) was politically progressive in its orientation.[10] These social-political concerns, and the solidarity they professed with progressive cultural movements in music, *Bauhaus* architecture, and the new objectivity [*die neue Sachlichkeit*], are vital elements to understanding the Vienna Circle's context and culture, its philosophical program and its polemical character.[11]

More surprising and salient is the appearance of Nietzsche and Dilthey in the Vienna Circle's early history.[12] There are numerous passages evoking a specific style of life-philosophical thought in Carnap's *Logical Construction*, his critique of metaphysics and Heidegger in 'Overcoming Metaphysics through the Logical Analysis of Language' (1931, revised 1932), and—the less well known but significant text for drawing out this critique's ethical and social-political implications—'Theoretical

9 See Reisch, G. A. *How the Cold War Transformed Philosophy of Science: To the Icy Slopes of Logic* (Cambridge, Cambridge University Press: 2005); McCumber, J. *Time in the Ditch: American Philosophy and the McCarthy Era* (Evanston, Northwestern University Press: 2001).

10 Dahms, H.-J. *Postivismusstreit.* (Frankfurt, Suhrkamp: 1994), pp. 38-39; Friedman, *A Parting of the Ways*, pp. 16-18.

11 Skepticism remains about the philosophical importance of this social-political context despite their political activities, see Richardson, S. S. 'The Left Vienna Circle, Part 1. Carnap, Neurath, and the Left Vienna Circle Thesis' *Studies in History and Philosophy of Science*, Part A, 40:1: pp. 14-24 (2009), pp. 14-24. On the importance of *Bildung* in Carnap, see Carus, A. W. *Carnap and Twentieth-Century Thought: Explication as Enlightenment.* (Cambridge, Cambridge University Press: 2007), pp.41-42.

12 Gabriel, G. 'Carnap and Frege' in Friedman, M. and Creath, R. (ed.). *The Cambridge Companion to Carnap* (Cambridge, Cambridge University Press: 2007), p.78.

Questions and Practical Decisions' (1934).[13] Nietzsche is the one metaphysician Carnap praises as being near to science and art without metaphysics. Frank argued in an essay from 1917 ('The Importance of Ernst Mach's Philosophy of Science for our Times') that Nietzsche and Mach shared the same spirit of radical Enlightenment and were the joint point of departure for genuinely (i.e., radically anti-metaphysical) positivistic thought.[14] Dilthey operates as a tacit resource for a number of Carnap's terms and argumentative strategies.

Dilthey and Nietzsche are unexpected sources for the early Vienna Circle insofar as both were associated by scientistic and Marxist critics with the separation of the human and natural sciences (Dilthey), the prioritizing of the aesthetic and the psychological, and an irrational and vitalistic '*Lebensphilosophie*.' This historical connection remains mysterious as long as we erroneously dismiss their thought as an anti-Enlightenment 'life-philosophy.' It is not as surprising if we consider how both figures advocated broadening and intensifying scientific inquiry, and engaged in their own extended critiques of metaphysics and religion. Nietzsche and Dilthey confronted metaphysics and theology for their reification and forgetting of lived-experience, and articulated a hermeneutical experimentalism in determining the interpretive character of scientific inquiry. Dilthey is a positivist insofar as this is defined as the abjuration of the possibility of metaphysics, i.e., any theory of true or transcendent

13 Carnap, *The Logical Structure of the World*; Carnap, R. 'Überwindung der Metaphysik durch logische Analyse der Sprache' in Carnap. *Scheinprobleme in der Philosophie und andere metaphysikkritische Schriften.* (Hamburg, Meiner: 2004) pp. 81-109. Translation: 'The Elimination of Metaphysics Through Logical Analysis of Languages' in Ayer, A. J. (ed.). *Logical Positivism* (Glencoe, Free Press: 1959); Carnap, R. 'Theoretische Fragen und praktische Entscheidungen' in H. Schleichert (ed.), *Logischer Empirismus: Der Wiener Kreis: Ausgewählte Texte mit einer Einleitung.* (München, Wilhelm Fink: 1975). I have altered the typical English titles. *Aufbau* is a more dynamic term (implying forming, building, constructing structuring, etc.) than 'structure' designates, and *Überwindung* signifies surmounting or overcoming.

14 Carnap, 'The Elimination of Metaphysics Through Logical Analysis of Languages', p.107; Frank, P. 'Die Bedeutung der physikalischen Erkenntnistheorie Machs fur das Geistesleben der Gegenwart' in Stöltzner, M. (ed.)*Wiener Kreis Texte zur wissenschaftlichen Weltauffassung* (Hamburg, Meiner: 2006), pp. 111-113. On Dilthey's empiricism, see Nelson, E. S. 'Empiricism, Facticity, and the Immanence of Life in Dilthey' *Pli: Warwick Journal of Philosophy*, 18: pp. 108-128 (2007), pp. 108-128.

being that reduces phenomena to mere appearances, and remaining within the immanence of the given through empirical scientific inquiry.[15] As Charles Bambach notes, Dilthey's commitment to science motivated his critique of the scientistic interpretation of science.[16]

Dilthey's critical hermeneutics of life is significant for the Vienna Circle's development. Its members did not exclusively articulate an internal account of the validity of logic and the sciences concerned solely with contexts of justification. As indicated by the name 'Vienna Circle of the Scientific World-Conception,' Neurath, Hahn, and Carnap advocated the broader cultural and educational legitimation of the scientific world-conception [*Weltauffassung*] as Carnap and Neurath preferred to call it in order to distinguish it from the popularized notion of worldview [*Weltanschauung*]. This scientific world-conception is not an arbitrary opinion or belief nor is it a cognitively justifiable or verifiable concept [*Begriff*]. A world-conception could mean either the extra- or non-scientific defence of science in the context of practical life (Carnap in the 1920's), or the expression of the unity of science as a system (Neurath and later logical positivism). Its meaning was consequently itself a matter of dispute in the early Vienna Circle.[17]

The 'left-wing' (Carnap, Neurath, Hahn, and Frank) presented the activities of the Circle as a living example of a more cooperative, open, and rational approach to the world, just as they interpreted themselves as being in solidarity with the progressive artistic, educational, and social-political movements of the time as noted in the first preface to Carnap's *Logical Construction* and in the Vienna Circle's manifesto.[18] In the life-

15 Compare Frank, 'Die Bedeutung der physikalischen Erkenntnistheorie Machs fur das Geistesleben der Gegenwart', pp. 111-113; Schlick as quoted in Ayer, *Logical Positivism*, p.83.

16 Bambach, C. R. *Heidegger, Dilthey, and the Crisis of Historicism* (Ithaca, Cornell University Press: 1995), pp. 137-138.

17 See Neurath, O. 'Soziologie im Physikalismus' (1931) in Stöltzner, M. (ed.)*Wiener Kreis Texte zur wissenschaftlichen Weltauffassung* (Hamburg, Meiner: 2006) pp. 269-314. Translation: 'Sociology and Physicalism' in Ayer, A. J. (ed.). *Logical Positivism* (Glencoe, Free Press: 1959), Translation: Neurath 1959, pp. 282-317.

18 Verein, Ernst Mach. 'Wissenschaftliche Weltauffassung. Der Wiener Kreis' in Stöltzner, M. (ed.)*Wiener Kreis Texte zur wissenschaftlichen Weltauffassung* (Hamburg, Meiner: 2006), pp. 3-29.

philosophical conclusion to the program of the Ernst Mach Society (*Verein Ernst Mach*), jointly published in 1929 by Carnap, Hahn, and Neurath, and dedicated to Schlick in honour of his remaining in Vienna, science and life are declared to be complementary forces in a scientifically oriented conception that is rooted in an affective disposition toward the world and life: the scientific lifestance serves life and life takes it up.[19] Two years later, Neurath described the unity of science—the ultimate form of reductive scientism for its opponents—in life-philosophical terms as the work of a 'generation,' as a tool of successful prediction and hence of 'life.'[20]

3. A Question of Life

Life-philosophical strategies and references are visible in the works of Carnap, Neurath, and Schlick. All three speak the language of 'life-philosophy.' They use the expressions lifestance [*Lebenshaltung*], life-intensification [*Lebenssteigerung*], life-formation [*Lebensgestaltung*],[21] worldview, world-stance, and world-conception, lived-experience [*Erleben*] as distinct from impersonal experience [*Erfahrung*] and objective knowledge [*Erkenntnis*], re-living [*nacherleben*], and life-feeling [*Lebensgefühl*].[22] A number of these expressions were in fairly common usage in central European thought by the 1920's. Words and strategies from—to use the categorization first developed by Max Scheler—the so-called '*Lebensphilosophie*' of Bergson, Dilthey, Nietzsche, and Simmel were often popularized in the service of conservative and reactionary cultural critique [*Kulturkritik*].[23] Popularized motifs from the metaphysical speculative variety of life-philosophy—a variety explicitly opposed by Dilthey and Misch—played a reactionary and anti-intellectual role in Germanic culture in vulgarized forms, particularly Spengler's *Decline of the West* and the biologistic vitalist racial-theories that fed into National Socialism. But the above mentioned 'founding figures' of life-philosophy were hardly fascistic

19 Verein Ernst Mach, 'Wissenschaftliche Weltauffassung. Der Wiener Kreis', p.27

20 Neurath 'Sociology and Physicalism', pp. 270 and 275.

21 Neurath advocated a scientific socialist oriented 'formation of life' in Neurath, O. *Lebensgestaltung und Klassenkampf* (Berlin, E. Laub:1928).

22 On Carnap's early uses of Lebensgefühl, see Carus, *Carnap and Twentieth-Century Thought*, p.123.

23 Scheler, M. 'Versuche einer Philosophie des Lebens. Nietzsche-Dilthey-Bergson,' in Scheler, *Gesammelte Werke*, vol. 3, (Bern, Francke: 1972), pp. 311–339.

racists, and in reality mostly modernistic moderately progressive thinkers with regard to culture and politics.

If at first glance, the connection between Dilthey and the Vienna Circle seems indirect and obscure, a more systematic study of the works of Schlick, Neurath, and Carnap show a familiarity with Dilthey's concepts and arguments. This is the case with Schlick, who explored issues of the 'sense of life' and ethical life-wisdom in relation to Nietzsche and Dilthey.[24] Schlick credits Dilthey with the distinction between theoretical scientific knowledge on the one hand and practical life, encompassing feeling and expression and grounded in a feeling of reality [*Wirklichkeitsgefühl*], on the other.[25] Dilthey did not divide theory from practical life as radically as the Vienna Circle, but he is a source for their emotivism. Carnap much more thoroughly divided 'logic and life' than Dilthey with the radical separation between cognitive knowledge [*Erkennen*] consisting of cognitively justifiable propositions and the non-epistemic expression of lived-experience [*Erleben*] and feeling [*Gefühl*] that lacks cognitive validity.[26]

Carnap's acquaintance with Dilthey's thought did not arise through a thorough study of Dilthey's writings but through conversations with Nohl and—his fellow Nohl student and life-long friend—Wilhelm Flitner. Gabriel depicts how Carnap adopted concepts and strategies from Dilthey through Nohl, unfolding them in his life-philosophical critique of metaphysics and its ideological enchanters.[27] This adaptation is

24 Schlick, M. *Lebensweisheit. Versuch einer Glückseligkeitslehre* und *Fragen der Ethik*, Gesamtausgabe, Abt. I, Bd. 3 (Wien, Springer: 2006).

25 Schlick, M. *Allgemeine Erkenntnislehre,* Gesamtausgabe Abt. I, Bd. 1 (Wien, Springer: 2009), p.446. On the priority of practical life in Dilthey, see Nelson, E. S. "Interpreting Practice: Epistemology, Hermeneutics, and Historical Life in Dilthey," *Idealistic Studies*, 38:1-2: pp. 105-122 (2008).

26 Schlick radicalizes this distinction in the Vienna circle period, see Schlick, *Lebensweisheit*, p.174. On Carnap's emotivism and 'life-philosophy,' see Mormann, T. "Carnap's logical empiricism, values, and American pragmatism," *Journal for General Philosophy of Science*, 38:1: pp. 127-146 (2007).

27 Gabriel, 'Introduction: Carnap Brought Home', pp. 3-20. However, Uebel maintains that this influence is merely autobiographical and inconsequential in Uebel, T. '"BLUBO-Metaphysik": Carnaps und Neuraths Verwerfung der Werttheorie des Suedwestdeutschen Neukantianismus' in Siegetsleitner, A. (ed.), *Logischer Empirismus, Recht und Moral* (Vienna, Springer: 2010), p.104.

significant in revealing the broader life-philosophical contexts, concerns, and stakes of Carnap's early thought, which is more philosophically nuanced and historically informed than commonly imagined by his advocates and opponents.

To consider why Dilthey's anti-metaphysical and hermeneutical life-philosophy is significant for Carnap's early project, it is helpful to distinguish Dilthey's thought from 'intuitionism,' 'irrationalism,' and the romantic and vitalistic reaction against the Enlightenment with which '*Lebensphilosophie*' was later popularly associated. Dilthey's thought has two primarily methodological axes, the empirical and the interpretive. In addition to unrestricted empirical inquiry, he argued for an interpretive understanding—via symbolic mediations and social objectifications—of the expressions and articulations of life in art, science, and history, including narratives of the self and others in autobiography and biography, which he recognised as the apex of knowledge. Dilthey rejected, as already involving language and history, the speculative intuition of spirit or life found in German Idealism and Bergson's life-philosophy. As logic and science are rooted in the life that they serve to elucidate, Misch described Dilthey's position in comparison with phenomenology and logical positivism as 'life-positivism.'[28] This non-reductive or interpretive positivism advocates a non-prejudicial and uncoerced empirical inquiry [*unbefangene Empirie*], or *empiria* without the truncation of empiricist dogmas [*Empirie, nicht Empirismus*], in contrast to more eliminative, restrictive, and mechanistic programs of classical empiricism and positivism.[29]

28 Misch, *Lebensphilosophie und Phänomenologie* , p.194; Misch, G. *Vom Lebens- und Gedankenkreis Wilhelm Diltheys* (Frankfurt am Main, Verlag G. Schulte-Bulmke: 1947), p.14.

29 Dilthey, W. *Gesammelte Schriften* (Göttingen, Vandenhoeck und Ruprecht), hereafter *GS* + volume number. Dilthey, *GS1, Groethuysen, B. (ed.). Einleitung in die Geisteswissenschaften: Versuch einer Grundlegung für das Studium der Gesellschaft und der Geschichte, Fourth Edition (1959) Translation: SW I: Introduction to the Human Sciences, ed. Makkreel, R. and Rodi, F. (Princeton, Princeton University Press:1989),* p.81; Dilthey, *GS 19*, Johach, H. and Rodi, F. (ed.). *Grundlegung der Wissenschaften vom Menschen, der Gesellschaft und der Geschichte* (1997), p.1; compare Makkreel on Dilthey's empirical orientation in SW I: p. 8, and Bambach on empiria in Bambach, *Heidegger, Dilthey, and the Crisis of Historicism*, p.138.

It is evident from Dilthey's works as well as his detractors—Heidegger and Gadamer criticise Dilthey for being a modernistic, positivistic, and scientistic epistemological thinker lacking an ontological perspective—[30] that Dilthey was an advocate of scientific inquiry, liberal modernity, the Enlightenment, and their educational importance. Dilthey associated the Enlightenment in Germany with Leibniz. Leibniz served as a model of how to interweave the singular and the universal, the concrete-practical and abstract-theoretical, multiplicity and the whole, and the historical past with social progress.[31] Dilthey realised this task in a historically aware form under the altered intellectual and social-political conditions of the late 19th- and early 20th-century. Dilthey is habitually interpreted as maintaining a drastic separation of the natural and human sciences, which Neurath diagnosed as the last residue of theology.[32] However, this distinction was not metaphysical or ontological, it is methodological.

At the same time as Dilthey methodologically distinguished the natural and human sciences, as each science has its own objects and ways of approaching them, his new philosophy of the human sciences presupposed the disenchanted and naturalized world, as disclosed in natural scientific inquiry and reflection, which he also described and analysed prior to Max Weber's better known account. The problem, in Dilthey's estimation, is not scientific inquiry but its dogmatic limitation and not modernity but its pathological developments. Naturalism became another reified metaphysics that misconstrued an affectively rooted worldview as a cognitively defensible theory and forgot the primacy of empirical lived-experience. Dilthey critiqued the self-understanding of traditional and contemporary metaphysics as self-deception. Instead of the disclosure of unqualified truths about being, historical analysis reveals in metaphysical utterances an indemonstrable attitude rooted in and expressing a 'feeling of life' and articulated as a 'worldview' and 'lifestance.' Several of Carnap's interpreters—Hans Haeberli, Arne Naess, and Günther Patzig—noted in the 1950's and 1960's the resonances between Dilthey and Carnap. [33] When Carnap was asked in

30 Gadamer, *HR*, pp. 9, 176-177, 186, 394.

31 Dilthey, SW II, 5; Dilthey, *GS 23*, Gebhardt, G. and Lessing, H.-U. *Allgemeine Geschichte der Philosophie. Vorlesungen 1900-1905,* p.331.

32 Neurath,'Sociology and Physicalism', p.295.

33 Gabriel, 'Introduction: Carnap Brought Home', pp. 5 and 17; Haeberli, H. *Der Begriff der Wissenschaft im logischen Positivismus* (Bern, P. Haupt: 1955), p.109.

the late 1960's about his relation to Dilthey, he expressed surprise at these connections. He denied at this late point having read Dilthey's works, despite the multiple citations of Dilthey and use of his language in his works during the 1920's.[34]

There are a number of references to Dilthey in *Logical Construction* and 'Overcoming Metaphysics' that point to familiarity with some of Dilthey's arguments and ideas. In Jena, Carnap studied with and developed a friendship with Nohl, who was a student of Dilthey's known for his writings on Nietzsche and promotion of pedagogical reform. In these turbulent years of war and revolution, Nohl and Carnap belonged to the progressive socialist oriented side of the *Wandervögel*, a German youth movement advocating a return to a more simple natural life and long stays wandering in the natural world.

The aporias and tensions of logic and life informed Carnap's intellectual formation. While Carnap embraced the new logic of Frege and Russell, he recurrently evoked the discourse of life and the feeling of life.[35] This language played a significant role in the statement of the Vienna Circle's collective project. It is not solely the irrationalist who has an affective disposition and mood, and who has feelings and needs.[36] Carnap speaks of an affective disposition [*Gemut*] that is oriented toward clarity and lucidity, which aims at bringing rationality back to life in order to serve it in opposition to the authoritarian obscurantist powers of enthusiasm, enchantment, and mystification. As in Dilthey's elucidation of both the rationality within life and its finite limits in relation to the affective and contextual character of life, Carnap's call for clarity, sobriety, and sociability—virtues that Levinas appeals to in an ethical register against the drunkenness of the poets and mystics who forget the other person—does not negate the reality that the nexus of life is radically non-transparent and can never quite be comprehended.[37] Akin to Dilthey's

34 Gabriel,'Introduction: Carnap Brought Home', p.17.

35 On life-philosophical tendencies in Frege, see Gabriel, G. "Logik und Leben: Georg Mischs Auseinandersetzung mit der traditionellen Logik," in *Dilthey-Jahrbuch für Philosophie und Geschichte der Geisteswissenschaften*, 11: pp.31-47 (1998), p. 44.

36 Carnap, *The Logical Structure of the World,* p. xvii.

37 Carnap, *The Logical Structure of the World*: p. xvi; 1967; p. xviii.

transformation of the ineffable from Schleiermacher's immanent indication of a transcendent God into a mark of immanence that does not entail a transcendent reality, and unlike the endorsement of the mystical in Wittgenstein's *Tractatus*, Carnap refuses—because of this affective and ultimately ethical commitment to life—to identify the ineffability and mystery that appears immanently within life with mysticism or with what transcends that life.

4. Reduction and Constitution for the Sake of Life?

The German title of Carnap's *The Logical Construction of the World* might play off of the German title of Dilthey's last major work *The Formation of the Historical World in the Human Sciences*, which also contains the word *Aufbau*. One appears to concern the logical constitution (*Aufbau*) of one aspect of the world to the next, and the other the formation (*Aufbau*) of the self-interpretive practices of historically conditioned individuals and groups. At opposite extremes at the level of theory, there is a practical family resemblance between these two works. In the case of the early Vienna Circle, most evidently in Neurath but also in Carnap, there is a pedagogical enlightening task in the latter's epistemic-logical project.[38] There is a basic orientation [*Grundeinstellung*] and life-feeling that resonates with contemporary movements of life that are responding to the questions of life.

It is Dilthey's thesis, also adopted by the early Heidegger in his 'Hermeneutics of Factical Life,' that life responds to and articulates itself. This proposal is not vague if it is understood to be a claim about immanence, self-reflexivity, and self-reflection. This self-reflective life-philosophical dimension is increasingly lost in Carnap and Heidegger. According to later critical or hermeneutical life-philosophers, Misch and Helmut Plessner, Heidegger sacrificed with the pathos of ethical idealism the actual personal life of the individual, and the individual's self-reflection within the conditions of life, on the altar of impersonal Being.

Carnap's early external justification of the role of science in life occurs in this hermeneutical and practical situation. This external justification

38 Uebel, 'Education, Enlightenment and Positivism: The Vienna Circle's Scientific World-Conception Revisited'.

appears to be false if we consider the positivist ideal of science as one in which all conclusions and theories are to be exclusively cognitively valid and value neutral. Yet, significantly, this is inappropriate to the immanent character of science. The external or contextual justification of scientific and logical languages was inevitably a hermeneutical-interpretive, affective-dispositional, or pragmatic concern for Carnap given the finite and incomplete character of conceptualization and interpretation typified by Gödel's incompleteness theorems. The results of scientific inquiry are to be value free through rigorous examination and re-examination without requiring commitment to one theory or ideology, which is the power of science in contrast with religion and metaphysics, science itself is not value-neutral in the nexus of life. Scientific inquiry is itself based in and oriented by a feeling of life, an affective-practical disposition, and lifestance. This lifestance is expressed and cultivated in the virtues of clarity, coherence, simplicity with fecundity, and sobriety. It proceeds through experimentalism and explanatory hypotheses open to revision. The value of value-neutral scientific inquiry is then an educational and progressive one in relation to life akin to movements in other realms of life mentioned by Carnap—and discussed more thoroughly by Neurath—such as art (new objectivity), architecture (*Bauhaus*), music (atonal), education (school reform), social life (the labour movement), and politics (social democracy and anti-fascism).

The phenomenological, life-philosophical, and hermeneutical context of Carnap's 'reductive' (that is, 'relational') empiricist program in *Logical Construction* has frequently been missed by his critics and proponents. Carnap explicitly describes reduction [*Zurückführbarkeit*] as a process of traceability and reorientation. This reorienting tracing of propositions to the phenomena given in lived-experience requires the construction and the articulation of basic empirical and logical elements in their holistic-structural *Gestalt*. Lived-experiences occur as integrated wholes out of which elements are belatedly [*nachträglich*] abstracted.[39] Wholes are not identical with logical-complexes, as propositions about a whole are not necessarily identical or transitive with propositions about its parts.

39 Carnap, 'The Elimination of Metaphysics Through Logical Analysis of Languages', p.6.

Rather than being atomistic and eliminative, reduction is a quasi-hermeneutical process of explication of meaning oriented by logical form in the context of scientific education [*Bildung*]. Instead of eliminating reduced objects, such as those constituting the social-cultural and individual domain, Carnap argues that they are maintained through a contextualization and elucidation of meaning in relation to more primitive or originary experiential elements and contexts. As intrinsically contextual and relative, experiences cannot be thought of as discrete isolatable atoms much less as absolute foundations independent of linguistic and theoretical mediation. This is not a temporary aspect of his thought. Carnap continues to be a precisionist about 'internal' questions and pragmatic about the 'external' choice of language and framework throughout his writings, particularly in *Logical Syntax of Language* (1934) and *Meaning and Necessity* (1947).[40] The relativizing stratagems pursued by Carnap prefigure their radical employment in Feyerabend, who is closer to Dilthey in stressing the interplay between the affective and the cognitive.

In §12 of *Logical Construction*, Carnap concludes that the employment of structural relational descriptions addresses the question of the 'logic of the individual' pursued in Dilthey and Neo-Kantianism. As in Dilthey, it is through structural relations that one increasingly approaches that which is individual. Common structures allow for the differentiation and specification of that which is uncommon and singular. Reduction does not eliminate the specific individual as anti-empiricists fear. It does not suppress 'life' or its mysteries and possibilities for the sake of a neutral science of a contingent and impersonal nature. Reduction is the interpretive construction of relations through translation. It is a logical contextualization that opens up the empirical life of objects, a life that is enchanted, reified, and suppressed in metaphysical and theological thought and turned against itself.[41] But life, existence, and being are not things. Against the reification [*Verdinglichung*] and pseudo-questions [*Scheinfragen*] that mistake a condition for an entity and the temporary

40 Carnap, R. *The Logical Syntax of Language.* (Chicago, Open Court: 2002); Carnap, R. *Meaning and Necessity: A Study in Semantics and Modal Logic*, 2nd ed. (Chicago, University of Chicago Press: 1956).

41 Carnap, 'The Elimination of Metaphysics Through Logical Analysis of Languages', pp. 50-51.

for the eternal, Carnap describes how life is comportment or a way of relating.[42]

Verification is the way [*Weg*] to the object. It means to test relations, and their conceptualizations, based on what is given and encountered in experience.[43] A proposition that lacks a way of accessing, questioning, and potentially verifying it is neither true nor false. It is cognitively empty. Without a way to it in physical or conceptual space, it is in a non-place outside the realm of validity.[44] The demand of positivism is that this space of concepts, in which each concept has a relative place, can be genealogically brought back through logically structured translations to the autopsychological basis of my own individual lived-experiences.[45] As opposed to being the technical domination of nature, it is in encountering the relationally and empirically given that the uniqueness of the object and sets of objects—objects consist of more than just things—is liberated and can emerge.

While the parsimony of reduction—the principle of substituting inferred entities with logical constructions adopted from Russell—does demystify metaphysical and theological entities, Carnap does not attempt to reduce the world to the formalism of logic or the a priori, much less to a speculative theory or thesis about the world. It is the reduction of complex knowledge and theory to the empirical world through the medium of relational lived experience or what Dilthey described as elementary forms of understanding and the material a priori of the structural categories of life. Both Dilthey's and Carnap's variations on contemporary versions of reduction and constitution—those of life-philosophy, Neo-Kantianism, and phenomenology—follow the a posteriori routes of empirical ontic constitution.

42 Carnap, 'The Elimination of Metaphysics Through Logical Analysis of Languages', p.51.

43 Carnap, 'The Elimination of Metaphysics Through Logical Analysis of Languages', §179.

44 Carnap, 'The Elimination of Metaphysics Through Logical Analysis of Languages', pp. 56-57.

45 Carnap, *The Logical Structure of the World*, p.1; Carnap, 'The Elimination of Metaphysics Through Logical Analysis of Languages', pp. 58-59.

Rolf George's English translation uses the Neo-Kantian expression 'cultural sciences.' Carnap's preferred German expression is Dilthey's *Geisteswissenschaften* [human sciences]. Carnap explicitly identifies psychology, as a science of individuals, as a human science. This is Dilthey's position. It was opposed by the classification of psychology as a natural science in Neo-Kantianism and in most of (earlier and later) positivism.[46] Whereas Neurath mistakenly criticised the difference between the natural and human sciences as inevitably presupposing a metaphysical distinction between two kinds of essence, Carnap argued in §23 of *Logical Construction* that 'since Dilthey' the objects of the human sciences have had their own autonomy and their own methodological and object-theoretical uniqueness.[47] The constitution or reduction system leads classes of statements back to their experiential basis without eliminating their autonomy and uniqueness. Carnap's concern for the singular is a residue of the generally underappreciated Continental philosophical setting of his argumentation, which remains unacknowledged by advocates of an ahistorical distinction between 'Continental' and 'analytic' philosophy.

Because of its holistic-structural constructive tendency to restore the particularity of phenomena, Carnap's reduction system does not imply, as Merleau-Ponty and much of the subsequent tradition of 'Continental philosophy' assumes, that propositional classes are undifferentiated or that their significance is lost in elemental atomistic sensations.[48] It is instructive that Merleau-Ponty—to take one influential example—did not recognise Carnap's early reliance on *Gestalt* psychology and meaning-holism, instead associating the Vienna Circle's 'reductionism' with a reduction to bare atomistic sensual elements.[49] Merleau-Ponty

46 On Dilthey's interpretation of psychology, see Nelson, E. S. 'Impure Phenomenology: Dilthey, Epistemology, and Interpretive Psychology', *Studia Phaenomenologica*, 10, pp. 19-44.

47 Neurath, 'Sociology and Physicalism', p.294 ('*Geisteswissenschaften*' is translated here as 'moral sciences'); Carnap, *The Logical Structure of the World*, p.29; 1967, 39.

48 Norris, C. *Minding the Gap: Epistemology and Philosophy of Science in the Two Traditions* (Amherst, University of Massachusetts Press: 2000), p.18; Watson, S. *Tradition(S): Refiguring Community and Virtue in Classical German Thought* (Bloomington, Indiana University Press: 1997), p.139.

49 Merleau-Ponty, M. *The Phenomenology of Perception* (London, Routledge: 2002), pp. Xvi, 27.

revealingly contrasted the direct access of consciousness to itself in Husserl's phenomenology with the indirect access proceeding through linguistic and logical mediation in logical positivism.[50] Merleau-Ponty accordingly intimated the hermeneutical character of meaning in Carnap and his opposition to it through a questionable appeal to a direct and intuitive bodily self-access.[51]

Carnap cites Dilthey approvingly in the context of upholding a sensitivity to a logic of lived experience, the singular, and the cultural in *Logical Construction*. This tendency in Carnap lends support to the prospect of articulating his early project as a logical empiricist hermeneutics—or 'quasi-hermeneutics' to distinguish it from Dilthey's methodological and later philosophical hermeneutics. This is not the naive and violent reductionism of his post-empiricist analytic and continental critics. Without metaphysical certainties or foundations, as Dilthey argued, language and conceptualization are inherently hermeneutical as there are no facts or data independent of interpretive processes. It is impossible to eliminate the hermeneutical situation of a context of interpretation, even if interpretation is identified with the pragmatically justifiable yet rigorous criteria of logical coherence, empirical verifiability, and explanatory power.[52] This identification distinguishes Carnap's early logical construction and reconstruction of the world and his later pragmatism from the aesthetic orientation of interpretation in Dilthey. A further aspect of Carnap's thought linking him with the anti-metaphysical life-philosophies of Dilthey and Nietzsche is his advocacy of non-cognitivism or emotivism about forms of expressive life. By diverging from the life-philosophical priority of aesthetic experience in these two thinkers, the privileging of artistic style over scientific sobriety and modesty, Carnap endeavours to acknowledge the powers of feeling and expression in life while avoiding the reification and irrationalization of the non-cognitive forces of human existence that threaten to bring the project of life clarifying itself to an end.

50 Ibid., pp. Xvi-xvii.

51 Ibid., pp. Xvi-xvii.

52 On Carnap's pluralistic logic and tolerant approach to the adaptation of languages of interpretation, see Restall, G. 'Carnap's Tolerance, Meaning, and Logical Pluralism' *Journal of Philosophy* 99:8: pp. 426-443 (2002).

As in proposition 6.5 of Wittgenstein's *Tractatus*, 'the riddle does not exist,' Carnap argues that there are no 'riddles of life' that are answerable questions. Life-issues can only be about practical situations.[53] The riddles and questions are not mystical for Carnap. They are practical and expressive, even existential in a non-cognitive emotive sense. They are not conceptual or theoretical questions that science or philosophy can resolve. The mysteries of life concern how ordinary people go about life and the decisions they make. The absence of metaphysical solutions to the riddles of life entails 'mysticism' for Wittgenstein; but for Carnap, revealing his affinity with Dilthey, it is practical life. Metaphysical propositions, including those concerning moral and aesthetic values and norms, are not false or uncertain. They are cognitively and epistemically, if not emotively and expressively, meaningless.[54]

Carnap argued in1934 that theoretical knowledge and science can and should inform and educate but they cannot supplant the duty of practical position-taking that individuals in the end must make for themselves—potentially for the worse.[55] Theory can inform yet underdetermines practice. Enlightenment through theory can prepare individuals for choice through education but it does not prove or replace the non-conceptual practical decision [*Entschluß*].[56] As in *Logical Construction*, practical life does not pose questions that can be theoretically resolved.[57] It is governed by pragmatic decisions that are often determined by unconscious motives and ideological forces that theory can at best expose and explain.[58]

The radical critique of 'superstition, theology, metaphysics, traditional morality, the capitalist exploitation of the workers, etc.' serves the

53 Wittgenstein, L. *Logisch-philosophische Abhandlung, in Werkausgabe, vol. 1* (Frankfurt, Suhrkamp: 1984), p.84; Carnap, *The Logical Structure of the World*, pp. 260-261; 1967, 287.

54 Wittgenstein, *Logisch-philosophische Abhandlung,* p.52; Carnap, 'The Elimination of Metaphysics Through Logical Analysis of Languages', pp. 81, 103.

55 Carnap,'Theoretische Fragen und praktische Entscheidungen', p.174; on theory and practice in the Vienna Circle, see Uebel, 'Education, Enlightenment and Positivism: The Vienna Circle's Scientific World-Conception Revisited'.

56 Carnap,'Theoretische Fragen und praktische Entscheidungen', p.174.

57 Ibid., pp. 173-176.

58 Ibid., p.176.

pedagogical function of clarification and education against 'distraction and mystification' [*Ablenkung und Vernebelung*]. Such 'narcotics' are to be excluded as theoretically senseless rather than rejected as conceptually false. Instead of producing indifference, Carnap concludes that theoretical enlightenment over the empirical sources and functions of the narcotic and 'appeal, education, example' are taken up by everyday life—which cannot be affectively or value neutral in relation to itself—for its own sake in how it lives and makes decisions.[59] Practical life—for Carnap as much as Dilthey—is a conflict of views or languages, of life-positions and expressions of the feeling of life that cannot be resolved by theoretical and scientific knowledge. The function of science, logic, and philosophy is pedagogical and the question is whether, how, and to what extent they are taken up in life.

5. Heidegger and the Nothing

In 'Overcoming Metaphysics,' Carnap diagnosed Heidegger's analysis of the nothing in 'What is Metaphysics?' as a confusion that substantialises the logical operation of negation by incorrectly positing and reifying 'nothing' as an object. Negation is merely the reversal of an existential proposition, and cannot itself be treated as affirming existence.[60] Negation derivatively and immanently denies the factual and logical propositions that it depends on for its significance. It has no further cognitive meaning, such as when Heidegger states that the 'Nothing nothings' [*das Nichts nichtet*]. According to Heidegger, the verbal *nothing* [*Nichts nichtet*] is neither a thing nor a meaningless null. 'Nothing' formally indicates the performative condition for the negativity that makes human thought and practices possible, including all positivity.[61] Carnap maintains that the statement that 'nothing nothings' has no actual cognitive content that can be thematised and validated even if it evokes a feeling akin to poetry.

59 Carnap,'Theoretische Fragen und praktische Entscheidungen', p.176

60 Carnap, 'The Elimination of Metaphysics Through Logical Analysis of Languages', p.95.

61 Heidegger, M. *Einführung in die Metaphysik* (Frankfurt am Main, Klostermann: 1983), p.116. On formal indication and the performative enactment of the nothing in Heidegger, see Nelson, E. S. "Language and Emptiness in Chan Buddhism and the early Heidegger," *Journal of Chinese Philosophy*, 37:3: pp. 472-492.

Carnap concluded from this and more traditional examples that metaphysical utterances senselessly reify logical operations in the assertion of being and nothing. The published version retains echoes of Carnap's earlier lecture in which metaphysics was critiqued through logical analysis and through a genealogical tracing of the history of words from meaningfulness to meaninglessness. Primary examples of this for Carnap are words such as soul and God as well as words such as life, existence, and being when taken as metaphysical. Their continuing power rests in their lingering earlier sense and in their affective aura. They have an ideological as opposed to a clarifying function. Logical analysis is not purely theoretical, as in later language analysis, as it serves an emancipatory function for scientific thought and life by breaking our absorption in the magic and mania of reified words. Carnap is concerned—in a manner akin to Adorno's more explicitly ethical-political assessments—with Heidegger's 'idolatry of words.'

In addition to applying formal logic to Heidegger's claims, section seven of 'Overcoming Metaphysics' illustrates Carnap's debt to Dilthey. Carnap develops the argument from Dilthey that metaphysics is a transition stage lacking both validity and contemporary necessity. Metaphysics is no longer myth and not yet art. Its systems are at best impoverished replacements for art, literature, and music in being an expression of 'the feeling of life.'[62] Carnap notes in accord with Schopenhauer, Nietzsche, and Dilthey that music is perhaps the purest expression of the feeling of life. This life-feeling is not a mystical or elemental force, however, and both Dilthey and Carnap are careful to explicitly distinguish it from a metaphysical or vitalistic force that would underlie life.

Heidegger answered Carnap indirectly by modifying his approach to the nothing, including later additions to his criticised essay 'What is Metaphysics?', and more directly after Carnap, Neurath, and other Vienna Circle participants were exiled. Heidegger celebrates their exile, linking logical positivism with Russian communism, Americanism, and the technological destruction of nature.[63] Heidegger connects positivism with modernist cultural and political developments exemplifying the

62 Carnap, 'The Elimination of Metaphysics Through Logical Analysis of Languages', pp. 106-107.

63 Heidegger, *Einführung in die Metaphysik*, p.228.

'massification of humans,' the flight of the gods, the darkening of the skies, and the rule of technology over nature. Adorno and Horkheimer—missing the different political involvements of both—merge logical positivism and Heidegger into two sides of the same political attitude that resigns itself before what exists.[64]

6. Logical and Hermeneutical Empiricism

Heidegger and Carnap increasingly moved away from the Dilthey-influenced elements of their early philosophies. Heidegger turned from his earlier hermeneutics of factical life, a strategy influenced by Dilthey and closer to the sciences and empirical life than his later thinking, while Carnap shifted to a pragmatic-semantic account of language and physicalist account of the sciences that was no longer explicitly part of a broader practical program of furthering enlightenment and popular education.[65] Unlike its earlier social-critical formulation in the 1920's, the elimination of metaphysics appeared in Post-War Anglo-American philosophy more dogmatic, exclusionary, and restrictive than critical and demystifying.[66]

Carnap during the 1920's interpreted the critique of metaphysics as part of legitimating and ideologically or polemically defending a scientific and social-democratic lifestance [*Lebenshaltung*]. This strategy has roots in Dilthey's advancement of empirical scientific inquiry and critique of traditional and contemporary metaphysics (including Comte's positivism as a rhetorically anti-metaphysical metaphysics), as the expression and articulation—more akin to art and poetry than science—of a 'feeling of life' in a worldview [*Weltanschauung*] instead of being a universally valid truth. Carnap applied this model to Heidegger and metaphysics more generally. Carnap's quasi-hermeneutics of formal logic, science, and lifestance is part of a larger project of the formation, cultivation, and education [*Bildung*] of life that furthers life through clarifying it. Scientific inquiry and education are coupled with critical reflection and thus indirectly with social transformation. Carnap's project is a deeply

64 Heidegger, *Einführung in die Metaphysik*, pp. 29 and 34; compare Dahms, *Postivismusstreit*, pp. 94-96.

65 Verein Ernst Mach, 'Wissenschaftliche Weltauffassung. Der Wiener Kreis', pp. 5-6

66 See McCumber, *Time in the Ditch*; Reisch, *How the Cold War Transformed Philosophy of Science*.

social-political project formulated at times in a value-neutral language. This value-neutral discourse was interpreted as political, modernistic, and socialistic by its philosophically anti-foundationalist, life-expressive, non-cognitivist, and politically progressive 'left-wing' and early conservative critics of the Vienna Circle, above all the economists of the Austrian school and Karl Popper.[67]

Dilthey and the early Carnap were both concerned with addressing experience in its sensuous phenomenal immanence, its holistic-structural relationality, and its linguistic formation and interpretation, while both refused to endorse phenomenalism as a metaphysical theory. The phenomenal and autopsychological point of departure for *Logical Construction* is methodological and heuristic for Carnap, who abandoned it a few years later in favour of physicalism. Carnap abandoned his early choice of a methodological phenomenalist basis in favour of a physicalist (methodological materialist) one in response to Neurath's objections.

Neurath objected to Carnap's early position that (1) science cannot be constructed from the methodological solipsism of the autopsychological [*eigenpsychischen*] basis, or the phenomenal 'subjective' lived experiences of a self in which objects are 'there-for-me,' but can only involve the comparison of statements with other statements and (2) only a unified physicalist language is compatible with the predictive character of science.[68] Schlick also rejected interpreting primary experiences as mediated by the first-person perspective. For genuine positivism, following Mach and Avenarius, the given is neutral, and 'primitive' experiences are impersonal, 'without a subject.' There is consequently no problem of subjectivism, much less actual solipsism or an 'egocentric predicament.'[69] This neutrality contrasts with the elementary lived-experiences and understandings of the first-person perspective in Dilthey's methodological individualism, which is both epistemic and social-theoretical. These experiences are 'mine'—they involve a conditional concrete self—yet not necessarily asocial, egoistic or solipsistic. Individual lived experiences are socially-historically mediated

67 Uebel, 'Carnap, the Left Vienna Circle, and Neopositivist Antimetaphysics', pp. 248-249; on Popper's hostility, see Hacohen 1998, pp. 711-734.
68 Neurath,'Sociology and Physicalism', pp. 290-291.
69 Schlick, M. *Philosophical Papers* (Dordrecht, Reidel: 1978), p.478.

in relations with others and things in the nexus of ordinary life. Humans only indirectly know themselves in their historical situation through their expressions and objectifications, and not through introspection, intuition, or a hypothetical construction from isolated elementary sense-experiences.

Dilthey and Carnap both maintain life-philosophically that concrete individual lived experiences are given relationally and these relations between experiences function—hermeneutically though the categories of life in Dilthey, logistically in Carnap—as the relative point of departure for cognitively valid knowledge. Heidegger and Neurath, and the turn from a pluralistic experience-oriented holism to the identity of linguistic holism—and the reified realm of signification that allows for no force or resistance external to itself—that shaped twentieth-century 'analytic' and 'continental' philosophy, tended to perceive the primacy of experience and of the individual to be residues of Cartesianism. Cartesian dualism is not overcome by the ontological or linguistic elimination of individual lived experience and the forcefully reconciled identity achieved through, to utilize Adorno's phrase, the 'liquidation of the subject.'[70] The Cartesianism overcome through compulsory reconciliation, and the enchantments of an impersonal monistic identity that eliminates the relational and heterogeneous dynamic of experience, is an antidote worse than the ailment. The Cartesian paradigm is more aptly challenged through an experientially-oriented methodological pluralism that places cognitively empty propositions, such as those about a duality or unity inherent in all things, into question rather than the reassertion of metaphysical monism.

In Dilthey and the early Carnap, experiences are relationally primary. As relational structural forms, lived-experiences are not foundationally primary in the sense of 'foundationalism.' Truth is only possible as a cognitive achievement oriented by method, which follows configurations, formations, and structures [*Gestalt*]. Science is structure or a differentiated relational whole: 'Science is essentially concerned with structure..., therefore, there is a way to construct the objective by

70 Compare, Adorno, T. W. *Notes to Literature*, tr. R. Tiedemann (New York, Columbia University Press: 1991), p. 246.

starting from the individual stream of [lived-] experience.'[71] Scientific objectivity is methodologically realized via intersubjectivity, which is—given the early Carnap's denial of the correspondence theory of truth—the actual basis of the positivist program of verification. Science is not an intangible and unconditional truth about nature. It is a social achievement based on lived-experience and intersubjective method.

Carnap's phenomenal given would be neutral and subjectless without the constitutive interaction of self and other. The mineness of the *eigen* is constituted though the otherness of the *fremd* at the same moment as the hetero-psychological is accessible through bodily life and expression. 'My' experiences are mine in that there is already a 'you,' such that the psychological is 'auto-psychological' relationally through others. Dilthey distinguished an abstract doctrinal and intellectualistic phenomenalism from the principle of phenomenality rethought through experiences of resistance, interruption and alterity, and sociality. Through such constitutive experiences of the self, the relational tension and co-givenness of self and other, of self and worldly phenomena, is revealed independently of metaphysical contentions about essence or substance. This principle of phenomenality is descriptive and analytic (interpretive) rather than a metaphysical doctrine about nature. Dilthey linked the first person perspective of 'inner' or 'lived' experience—which is expressed and understandable in psychology and history, autobiography and biography—with the this-worldly immanence of the 'principle of phenomenality.'[72]

Despite the mutuality of experience and language and the appropriation of non-atomistic Gestalt-psychology in the *Logical Construction*, Carnap and Dilthey differed over the significance of the interpretive character of language and thus of how to articulate and what to count as experience.[73]

71 Carnap, *The Logical Structure of the World,* p.91; translation modified from Carnap, 1967: p. 107. On the centrality of differential holism and structure in Dilthey, see Rodi, F. *Das strukturierte Ganze: Studien zum Werk von Wilhelm Dilthey* (Weilerswist, Velbrück Wissenschaft: 2003).

72 Dilthey investigated permutations of phenomenality in his 'Breslauer Ausarbeitung,' see *GS 19*, pp. 64-65 / *SW I*, pp. 251-252.

73 On Carnap's appropriation of Gestalt psychology, see Feest, U. "Science and Experience / Science of Experience: Gestalt Psychology and the Anti-Metaphysical Project of the *Aufbau.*" *Perspectives on Science*, 15:1, pp. 1-25.

Both are concerned with interpretation, and interpretation is taken to be either primarily formal logical or as consisting of the full array of questions and strategies interconnected with interpretively understanding the life-nexus.

Carnap defines cognitive sense in contrast with the non-cognitive, problematically reducing the former to an emotivist condition. Since tolerance is not restricted to the logic of the sciences, Dilthey more liberally and tolerantly traced the differences, tensions, and the continuities between non- or minimally cognitive expression and theoretical cognitive knowledge. This is evident in their usage of the word *Aufbau*, a central term for both. It primarily signifies historical 'formation' of the multiplicity, range, and richness of human experiences in Dilthey, and logical 'construction' in Carnap. Dilthey contrasted the historical-contextualizing and the dogmatic-isolating empirical methods.[74] Only one of these strategies, which Dilthey ascribes to the German context due to the heightened historical consciousness and cultivation, requires a rich fabric of description, analysis, comparison, and an induction towards the complex variety of the life-nexus.

Dilthey's tactics, which are judged to be too close to the empiricism of Hume and Mill in standard views of philosophical hermeneutics, include a process of inductive inference from individual expressions and manifestations of life to the whole life nexus through structural relations. Since the historical singular cannot be deduced a priori from the universal or from a totality, there is also a reverse inductive inference from the whole to the singular through structural relations that allow the individual to appear as a unique configuration. This interpretive oscillation is irreducible to the closed circuitry of the hermeneutical circle of philosophical hermeneutics, which operates as a kind of poetic or literary deductivism in which the thinker disregards the conditional ontic *empiria* [*Empirie*] and corresponding scientific research. It is the structural and differentiated character of historical life that necessitates experientially and ontically engaging this life.

74 *GS 5*, p. *LXXIV.*

7. Unified or Pluralized Science?

Despite the intersecting phenomenal-experiential inclinations shared by the early Carnap and Dilthey, Dilthey remains the more radically pluralistic empiricist. He would presumably, and legitimately, have extended his critique of the overly reductive positivism that forgets the heterogeneity of the phenomena and the self-undermining of scientific inquiry in its metaphysical totalization from Comte's sociology to the Vienna Circle's project of a unified science.[75] In the context of opposing an earlier incarnation of a positivist unified science, Comte's complete science of sociology, Dilthey remarked:

> My attack on sociology thus cannot be directed against a discipline of this sort [i.e., the science of social organizations], but is rather aimed at a science that seeks to comprehend in one science everything which occurs de facto within human society. Such comprehension would be based on the following principle: Whatever occurs within human society in the course of its history must be integrated into the unity of one and the same object.[76]

Dilthey was not an uncontroversial figure for the Vienna Circle, especially Neurath who appealed to the project of a unified science to repeatedly criticise Dilthey's differentiation of interpretive understanding [*verstehen*] and causal explanation [*erklären*] as the primary methods of the human [*Geisteswissenschaften*] and natural sciences [*Naturwissenschaften*].[77] The 'understanding' of human scientists does not enter into the propositions of science any more than their cups of coffee, which have a stronger underpinning in researchers' material reality.[78] On the basis of physicalism, and the behaviourism that constitutes the only adequate materialist psychology, Neurath rejected

75 On Dilthey's ontic pluralism and Heidegger's ontological monism, which reproduces the traditional metaphysical distinction between reality and appearance in the ontological-ontic difference, see Nelson, E. S. 'The World Picture and its Conflict in Dilthey and Heidegger' *Humana.Mente*, 18: pp. 19–38.

76 Dilthey, *GS* 19, p. 421 / SW I: p. 498.

77 Neurath 'Soziologie im Physikalismus': pp. 283-287; compare Uebel on Neurath and verstehen inUebel, T. "Opposition to Verstehen in Orthodox Logical Empiricism," in Feest, U. (ed.), *Historical Perspectives on Erklären and Verstehen* (Dordrecht, Springer: 2010) pp. 291-309.

78 Neurath, M. *Empiricism and Sociology: The Life and Work of Otto Neurath* (Dordrecht, Reidel: 1973).

Dilthey's concepts as dualistic remnants of metaphysics and theology.[79] Neurath misconstrues *Verstehen* from Dilthey to Weber as a merely affective empathy and 'feeling' oneself into the other rather than recognizing it as a cognitive scientific achievement methodologically incorporating affectivity. The cognitive orientation of methodological interpretive understanding led Gadamer to reject Dilthey's and Weber's *Verstehen* as overly positivistic and scientistic and Habermas and Apel to communicatively rehabilitate it.

For the sake of a variety of practices of causal explanation, inductive inference, interpretive understanding, and structural-functional analysis in the sciences, Dilthey defended methodological pluralism against the thesis that there can be solely one valid unified science. Dilthey interpreted the positivist project of a unified totalizing science—in its Comtean form—as anti-empirical and as presupposing a truncated philosophy of experience. Such positivism is more indebted to metaphysics and theology than the experiential differentiation of the sciences according to the empirical demands of their objects. The empirical should not be restricted to a few isolated purified elements. It should be increasingly understood in its contextuality, fullness, and variance. In contrast to Comte's 'narrow positivism,' psychological and historical phenomena have their own configurations calling for their own forms of inquiry. The empirical encompasses in a more expansive 'philosophy of experience' [*Erfahrungsphilosophie*]—as David Hume and John Stuart Mill only insufficiently recognised—psychological and historical conditions.[80]

8. Conclusion

Naess's and Gabriel's claim that Dilthey's and Carnap's notions of worldview and world-conception are as totalizing as the metaphysics they replace is unconvincing to the extent that these are inevitably heterogeneous and in agonistic conflict [*Widerstreit*] without the

79 Neurath 'Soziologie im Physikalismus', pp. 283-287.

80 *GS* 23, p.2; Dilthey differentiates experientially narrow and inclusive forms of positivism in *GS* 2, *GS* 2: Misch, G. (ed.). *Weltanschauung und Analyse des Menschen seit Renaissance und Reformation*, Fifth Edition, p.358 and *GS* 4,Nohl, H. *Die Jugendgeschichte Hegels und andere Abhandlungen zur Geschichte des Deutschen Idealismus*, Second Edition, pp. 545-546.

possibility of a final resolution for Dilthey.[81] Carnap and Neurath justify the world-conception pragmatically in relation to life; they also diminish the pluralistic and agonistic dynamic that Dilthey described as the conflict and contest [*Widerstreit*] of worldviews.[82]

Dilthey's pluralistic commitment to heterogeneity and individuality is weakened in Carnap, who directs it toward the choice between logical languages rather than the full multiplicity of life-formations. Yet a more limited pluralism remains at work in Carnap's pragmatism about meaning and linguistic frameworks. Based on the impossibility of there being one unconditional or complete language for science, Carnap concluded: 'It is not our business to set up prohibitions, but to arrive at conventions.'[83] 'In logic, there are no morals.'[84] There is an orientating ethos and approach [*Einstellung*] to life in the conventionalist-nominalist renunciation of an ultimate philosophical (or non-philosophical) language and in his formulation of the principle of tolerance between different linguistic frameworks for logic, mathematics, and the sciences. This principle of tolerance promotes overcoming the 'impediment' of striving after 'correctness' and reveals 'a boundless ocean of unlimited possibilities.'[85]

Dilthey's and Carnap's pluralism about life-views and languages places in doubt the assertion that the methodological and emancipatory critique of metaphysics is as totalizing as the metaphysics they suspend.[86] There is more than life-philosophical obscurantism and reductive scientism after the end of metaphysical systems. This is articulated in the idea of a culture that is capable of furthering rational and scientific inquiry, including about itself in the human sciences, without liquidating the

81 Gabriel, G. 'Carnap's 'Elimination of Metaphysics through Logical Analysis of Language': A Retrospective Consideration of the Relationship between Continental and Analytic Philosophy," in Parrini, P., Salmon, W. C., Salmon, M. H. (eds.), *Logical Empiricism: Historical and Contemporary Perspectives* (Pittsburgh, University of Pittsburgh Press: 2003), p. 40.

82 See Nelson, 'The World Picture and its Conflict in Dilthey and Heidegger', pp. 19-38.

83 Carnap, *The Logical Syntax of Language,* p. 51.

84 Carnap, *The Logical Syntax of Language,* p. 52.

85 Carnap, *The Logical Syntax of Language,* p. xv.

86 Gabriel, 'Carnap's 'Elimination of Metaphysics through Logical Analysis of Language", p. 40.

context of practical life that orients and gives rationality and science their significance.

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Merleau-Ponty's Ontology of Life

JAMES DIFRISCO

Introduction

The theme of life is generally a neglected one in the interpretation of Merleau-Ponty's philosophy, and for several reasons. The concept of life does not appear to occupy an ultimate position in Merleau-Ponty's thought, but rather lies buried in lesser-known works and in the shadow of more prominent notions, such as that of the body, the perceptual relation, and the flesh. Moreover, Merleau-Ponty's initial inquiry into the being of life is de-emphasised in his own self-interpretation. In his first work, *The Structure of Behaviour*, Merleau-Ponty investigates life as a type of Gestalt that is structurally distinct from the orders of matter and mind, but in his conclusion he states that the problem of life is reducible to the 'problem of perception.'[1] After finishing that work, he therefore turns to the problem of perception, writing his most widely read and well-known work, *Phenomenology of Perception*. With this work, the inquiry into the problem of life appears to be closed: the being of life is explained through the problem of perception by considering it as a type of perceptual object.

But the theme of life reasserts itself for reasons internal to the development of Merleau-Ponty's ontological project. Simply put, the

1 Merleau-Ponty, M. *The Structure of Behavior*, trans. Alden L. Fisher (Pittsburgh, PA, Duquesne University Press: 1983), p. 224. Hereafter cited as *SB*.

ontological project of Merleau-Ponty's philosophy inquires into the constitutive relations of perception and being in the attempt to challenge and reconfigure the received antinomies of philosophy — idealism and realism, subjectivity and objectivity, consciousness and matter, etc. In the development of Merleau-Ponty's thought, organic life comes to displace the perceiving body of *Phenomenology of Perception* as the proper object of this ontological project because it allows for a more fundamental reconfiguration of the received oppositions — particularly that of consciousness and matter.

Phenomenology of Perception realises Merleau-Ponty's ontological project in its own way by determining the body as the subject of perception.[2] The body appears in this work as an originary subject-object, both perception and being, consciousness and matter, and to this extent it challenges the traditional opposition of these terms. Such an originary 'third term' as the body, however, can appear in one of two ways: either as a combination of the opposed terms, or as an original structure from which they derive. The disclosure of the body in *Phenomenology of Perception*, despite the other merits of that work, is realised more as a combination of consciousness and material body than as an original structure. Hence, the body is determined there as 'latent intentionality,' or as 'the vehicle of being-in-the-world.'[3] The discovery of the originary structure of the body is too quickly recaptured for the benefit of consciousness and lived experience by being interpreted in terms of existential subjectivity. To the extent that it is conceived as a combination of the opposed terms, then, the body as it is thought there is not approached at its ontologically most fundamental level. That is why, looking back on *Phenomenology of Perception* in his last writings, Merleau-Ponty remarks: 'The problems posed in [*Phenomenology of Perception*] are insoluble because I start there from the 'consciousness'-'object' distinction.'[4]

2 'We have rejected any formalism of consciousness, and made the body the subject of perception.' Merleau-Ponty, M. *Phenomenology of Perception*, trans. Colin Smith (NY, Routledge: 1962), p. 261. Hereafter cited as *PP*.

3 For examples of the first, cf. Merleau-Ponty, *PP*, pp. 106, 248, 270; for the second, cf. Merleau-Ponty, *PP*, pp. 94, 160, 266.

4 Merleau-Ponty, M. *The Visible and the Invisible*, trans. Alphonso Lingis (Evanston, IL, Northwestern University Press: 1968), P.200. Hereafter cited as *VI*.

In effect, Merleau-Ponty's phenomenological approach to carrying out the ontological project by recourse to lived experience actually prolongs the consciousness-object opposition which it set out to question. A more radical way of carrying it out is reached by starting, not 'from above' in the incarnation of perception in the human body, but 'from below' in the emergence of perception from corporeal being — in *life*. Life is not just a perceptual intentionality that has a corporeal body, but rather an original and non-derived perceiving corporeality. For that reason, it represents a more decisive challenge to the consciousness-matter or consciousness-object distinction than does the perceiving body, as well as a more fundamental determination of the place of perception in being. This thought of life is opened in Merleau-Ponty's description of the vital Gestalt in *The Structure of Behavior*, but he does not follow it through in his conclusions there. It is only later in his lecture courses on nature that he returns to the Gestalt of life to draw out its ontological implications for both animal life and human life. And it is in this return to the notion of Gestalt, I argue, that Merleau-Ponty reaches the deepest fulfilment of his ontological project.

The following paper is composed of three parts. I first present and critically interpret Merleau-Ponty's treatment of the ontological problem posed by the vital Gestalt in *The Structure of Behavior*. Second, I interpret a passage from the second lecture course on nature as a more satisfactory response to this same problem. Third, I indicate how this treatment of life in *Nature* is expanded to reintegrate perception into a more fundamental ontology of life.

The result of our investigation is that life, rather than the perceiving body, manifests the more originary structure as it is life that gives the constitutive relations between perception and being. It therefore cannot be the case, as Merleau-Ponty first thought, that life forms part of the 'problem of perception.' Rather, the reverse would be true, namely that perception is the problem of life.

1.

In Merleau-Ponty's first work, *The Structure of Behavior*, life is conceived as a region of Gestalt organisation that is structurally distinct

from the orders of matter and mind. This idea is developed primarily in the third part of that work, 'The Physical Order; The Vital Order; The Human Order.'[5] Merleau-Ponty's principal undertaking in this section is to critique the notion of substance as it functions in different accounts of the relations between matter, life, and mind, and to give an alternative account based on the notion of 'form', 'structure', 'Gestalt', or 'whole'.

For a 'philosophy of substance,' reality is composed by one or more self-contained types of thing. Classical mechanism makes use of this notion of substance in its picture of the material world as a self-contained system in which a given quantity of matter circulates. Because it is self-contained and wholly determinate in itself, this system forms a linear causal series in which cause and effect are quantitatively equal. In effect, what is real must be either a mode of this physical substance, or else another substance entirely. Applied to the specific reality of life, then, 'substantialist' thinking requires that it be conceived either as a certain configuration of matter, or else another type of thing than matter — a vital substance, *vis essentialis*, or spirit. For this reason, 'substantialist' accounts of the relation between matter and life inevitably return to the antinomy of mechanism and vitalism.

Merleau-Ponty attempts to move between mechanism and vitalism by understanding life through what he calls a 'philosophy of form.' The latter differs from the philosophy of substance in that it rejects the conception of the physical world as a self-contained circulation of a determinate quantity of parts. Instead, it maintains that the determinate series of causal laws forming the 'substance' of a physical system cannot be abstracted from the finite process of apprehending it. The causal law is always apprehended within a concrete structure of the physical world. Physical experimentation aims to isolate lawful correlations from the concrete structure of the world, but since the latter is composed by an indefinite multiplicity of laws and intersecting conditions, this operation can never be completely successful. The linear causal series model of the physical world is thus an ideal limit of the experimental sciences, a limit which is never realised in fact. For Merleau-Ponty, to make this ideal limit a constitutive principle of the physical world is an 'illegitimate

5 Merleau-Ponty, *SB*, pp. 129-184.

extrapolation.'[6] Physical causality therefore cannot be separated from the apprehension of the structure which always remains on the 'horizon' of physical knowledge.[7]

As a result of this idea, there remain indeterminacies, gaps, and uncoordinated residues in the physical world. Yet the uncoordinated residue of a causal explanation represents nothing in particular, no determinate being with positive characteristics. Physical structure is not a 'more profound layer of being' than the causal law; rather, it is nothing other than material for further laws.[8] There is structure *de jure* in the physical world, but in actuality it is composed of only particular *de facto* structures. Physical knowledge thus consists in a mobile 'dialectic' of structure and law, in which structures are resolved into laws, which in turn necessitate that further structures are apprehended. Defining the order of matter in this way implies a significant ontological departure from the philosophy of substance: the physical world is not defined by its own being in opposition to the perception of it; instead, it is defined by its perceived being.

As for the order of living beings, its difference from matter must lie at the level of structure rather than substance for a philosophy of form. Life is not a different type of thing than matter; it is rather a 'retaking and new structuration' *of* matter.[9] Nevertheless, the structure of living beings differs in kind from physical structures. Whereas the resistance of physical structure to complete determination is a negative phenomenon, not being the resistance of this or that positive being, that of vital structure can be positively attributed to the originality of its living unity over against the unity of physical systems.[10] This new form of unity is precisely the meaningful unity of behaviour, as opposed to the objective motions studied by physics. The 'structures' in the apprehension of vital structures would thus be 'certain nuclei of signification, certain animal essences — the act of walking toward a goal, of taking, of eating bait, of

6 Ibid., p.139.
7 Ibid., p.143.
8 Ibid., p.142.
9 Ibid., p.184.
10 Ibid., p.155.

jumping over or going around an obstacle.'[11] For Merleau-Ponty, these unities of behaviour cannot be simply translated into the language of physical structure: there is an irreducible gap between the organism considered as a physical structure and the organism considered as a vital structure.

For this reason, vital structures, unlike physical structures, do not exist at the same 'layer of being' as the physical law. They cannot be conceived merely as 'material for further laws.' The 'animal essences' or 'nuclei of signification' are stable unities of behaviour rather than merely the shifting background for apprehending a particular law. Otherwise stated, the organism is not merely a structure *de facto*, but *de jure*.[12] The organism in some way bears its own structure. It is not only an object perceived in the world, but also a kind of perceiving 'subject' with its own kind of 'world'. There is not only a structure of the organism, but also a structure *for* the organism.

Defining the order of life by its structure implies a similar departure from the 'substantialist' approach as in the physical world. The real organism cannot be defined in opposition to the perception of it. In this case, however, the object we perceive is itself 'perceiving', is already in some way a complex of perception and being before the advent of our perception. We therefore have two senses of structure: perceived structure and perceiving structure. When it is applied to life, the concept of structure thus acquires an ambiguous signification that can only be clarified by determining more fundamentally what its 'structural' difference from matter really means. Merleau-Ponty presents three different ways of accounting for this structural originality of life: projection, vitalism, and 'immanent signification'.

For 'projection', as its name suggests, the meaningful unity of vital structure exists as an ideal projection onto the real being of the organism. The originality of vital structure is thereby conserved by detaching it from the real (mechanistic) structure of the organism and placing it within the subjective conditions of knowledge. But this idea lacks

11 Ibid., p.157.
12 Ibid., p.154.

explanatory power because it fails to account for the origin of the projection. As Merleau-Ponty argues, 'Every theory of projection [...] presupposes what it tries to explain, since we could not project our feelings into the visible behavior of an animal if something in this behavior itself did not suggest the inference to us.'[13] Clearly our science of the organism exists as something 'ideal'. But the ontological problem posed by vital structure is precisely how the ideal moment is suggested by the real organism itself, how the thing that suggests the projection, the thing in relation to which it is secondary, itself exists.

But if the originality of vital structure cannot be maintained by detaching it from the real organism, then it seems it could only be maintained by placing it within the real organism. In this way, Merleau-Ponty argues, it would seem that the theory of projection is only overcome by recourse to some version of vitalism.[14] If the whole is more than the sum of its parts, but is not super-added as a projection of consciousness, then it must be just as real as the parts: it must exist as a special type of part-thing. But this solution participates in the same substantialist thinking as mechanism or projection, which is precisely what the philosophy of form attempts to overcome. For if the whole is more than the sum of its parts, but must exist in the manner of a real part, this would mean that whole and parts exist as two different types of 'substances', or as two distinct and equally positive beings. But what sort of solution could leave this 'positivism' of substantialist thinking behind in order to articulate the structural originality of living beings?

After presenting this antinomy of projection and vitalism, Merleau-Ponty proposes his own solution to the ontological problem of vital structure. His solution attempts to articulate what the theory of projection fails to address: that which suggests applying the projection, or 'immanent signification'. The intelligible whole of behaviour is not a projection, but an immanent signification given in our perception of the organism, like a physiognomy. The organism is not entirely a 'real' being; 'it is a unity of signification, a phenomenon in the Kantian sense.'[15] That the organism is a 'phenomenon' means that in it, ideal and real cannot be separated into

13 Ibid., p.156.
14 Ibid., p.154.
15 Ibid., p.159.

perception and being; rather, the true organism is eminently a perceived being, its structural originality is adequately given in perception. This phenomenal being of the whole involves a convergence of both perception and being in perceived being: on the one hand, the projection finds what it would project already there in the organism, perception rejoins a being that is already of the order of perceived being; on the other hand, the being of the organism is nothing outside of its being-perceived, it is a structure, not for itself, but for the observer.

In this way, Merleau-Ponty's 'immanent signification' moves between the alternatives of mechanism and vitalism by making vital structure a 'phenomenon'. 'Immanent signification' rehabilitates projection by re-thinking it phenomenologically as perception. But could this rehabilitation not also be applied to the vitalist position? In that case, to rethink the vital substance as behaviour would mean conceiving life as a perceived being that itself perceives.

If we look at the consequences of the idea of 'immanent signification', it becomes clear that it falls back into the problems of 'projection' without such a corresponding rehabilitation of vitalism. 'Immanent signification' is open to the same critique as the theory of projection — namely, that it 'presupposes what it tries to explain.' As Merleau-Ponty argues, 'We could not project our feelings into the visible behaviour of an animal if something in this behavior itself did not suggest the inference to us.'[16] In the same way, we could not determine the organism as a unity of behavior unless the organism itself were a unity of behaviour. The being of behavior is not exhausted by its characterisation as 'signification', or as 'a whole which is significant for a consciousness which knows it.'[17] Instead, behaviour has a vital signification for the organism whose behaviour it is, and it is in relation to this that its 'signification' for the consciousness that knows it is secondary.

If we do recognise it as being meaningful for itself, however, would this not require placing 'consciousness' or 'mind' in the organism? On the contrary, a rehabilitation of vitalism would have to involve a rethinking

16 Ibid., p.156.
17 Ibid., p.159.

of the 'mind' of the organism. The idea of 'immanent signification' re-conceived the perceptual relation so as to circumvent the 'positivism' of 'projection'. A similar reconceptualization would be necessary in order to rehabilitate vitalism. This would mean avoiding the 'positivistic' alternatives of vitalism or finalism — i.e., that the vital element is either a special type of force or real cause, or that it is an idea contained in the organism. In fact, Merleau-Ponty's discussion of vitalism takes place within these positivistic alternatives. Quoting Hegel, he writes: 'The mind of nature is a hidden mind. It is not produced in the form of mind itself; it is only mind for the mind which knows it: it is mind in itself, but not for itself.'[18]

What would it mean to conceive the organism's being for itself outside of this Hegelian opposition, to place 'the negative' in the organism? It would mean conceiving the 'mind' of the organism as immanent to its physico-chemical structure — not a consciousness descending into matter, but a unity of life in which behaviour emerges from morphological structure. This would allow us to conceive a unique type of meaning for the organism without immediately referring it back to the prototype of a meaning or significance 'for the consciousness that knows it.'

I argue that Merleau-Ponty in his second lecture course on nature returns to the ontological problem of vital structure explored in *The Structure of Behaviour*, but with a view toward the rehabilitation of vitalism that we have suggested. It is no coincidence that he refers to the same lines from Hegel as before, this time explicitly refusing its positivistic alternatives: 'Life would be Spirit in-itself, and Spirit would be life for-itself. *But life is not yet Spirit in itself* [...] To grasp life in the things is to grasp a *lack* in the things as such.'[19]

18 Hegel, G. W. F. *Jensener Logik*, in *Hegels Sammtliche Werke kritische Ausgabe*, ed. G. Lasson (Leipzig, Meiner: 1905), p.113. Cited in Merleau-Ponty, *SB*, p.161.

19 Merleau-Ponty, M. *Nature: Course Notes from the Collège de France*, trans. Robert Vallier (Evanston, IL, Northwestern University Press: 2003), pp. 157-8 (emphasis added). Hereafter cited as *N*.

2.

At the end of *The Structure of Behaviour*, Merleau-Ponty remarks that 'all the problems which we have just touched on are reducible to the problem of perception.'[20] Upon finishing the work, he then turns toward a sustained inquiry into the problem of perception in the well-known sequel, *Phenomenology of Perception*. It is not until later that he returns to problems approached in *The Structure of Behaviour* that would not appear to be reducible to the problem of perception: specifically, the being of life, not as a meaning for the perceiver of nature, but as the 'autoproduction of a meaning.'[21] If the concept of Gestalt served to unite subjective and objective sides, the subjective side of meaningful perception and the objective side of the self-organisation of the perceived, the problem of perception only addresses the subjective side of the vital Gestalt. For this reason, *Phenomenology of Perception* reverts to the thought of a nature in itself which formed the starting point of *The Structure of Behavior* but which was almost overcome there.[22] In order to reach an ontological characterisation of nature, it is necessary to approach it from the side of its objective Gestalt, to take up the contributions of science and inquire into the birth of perceptual consciousness in living nature as Merleau-Ponty's first work attempted to do. In this sense, the true sequel of *The Structure of Behavior* is not *Phenomenology of Perception*, but rather the lecture courses on nature from 1956 to 1960.

The transition from *The Structure of Behavior* to *Nature* coincides with a shift toward determining the mode of being of life in terms of the objective rather than subjective sense of Gestalt. This shift becomes most evident in the second lecture course. In what follows, we examine the first part of that course as a return to the ontological problem of vital structure that gives a solution which is superior to 'immanent signification' and which has far-reaching implications.

20 Merleau-Ponty, *SB*, p. 224.

21 Merleau-Ponty, *N*, p. 3.

22 At the beginning of *The Structure of Behavior*, Merleau-Ponty writes: 'By nature we understand here a multiplicity of events external to each other and bound together by relations of causality'. (Merleau-Ponty, *SB*, p. 3).

Merleau-Ponty's return to the ontological problem of vital structure emerges from his interaction with two studies of behavior in embryology.[23] It was because the concept of behavior eludes the classical division of mind and matter that Merleau-Ponty made it central in *The Structure of Behavior*. It functions in a similar way here to shift the terms of the debate between mechanism and vitalism. Considering behavior within the parameter of embryology, however, represents a novel methodological device. Embryology effects a kind of reduction of the organism to its genesis: 'Genesis or emergence, which poses the problem left in suspense by a transcendental attitude referring to the ideal order.'[24] To reduce the organism to its embryogenesis ensures that no part of the articulated organism which remained disarticulated in its embryonic organisation (i.e., the central nervous system) can be substituted for the function of the whole. The phenomenon of genesis is, in this way, the organism's 'proof of totality'.[25]

'Proof of totality' is exactly what Merleau-Ponty finds in the work of G. E. Coghill and A. Gesell, and since the concept of totality occupies the center of Merleau-Ponty's renewed treatment of life, it would be useful to first outline what he draws from these studies. In brief, Coghill's work on a genus of salamander, *Amblystoma*, describes the embryogenesis of its nervous system as a process guided by the embryonic Gestalt of the organism. Coghill shows how the mechanism of nervous conduction, formerly supposed as the organising principle of growth and differentiation, is itself generated from a series of pre-neural metabolic gradients. This is significant for two reasons: (1) the intuitive tendency to conceive of embryonic growth and differentiation as the effect of a centralised agency mobilizing a mass of indifferent matter is discredited. (2) The centralised agency of the nervous system is diffused into a totality that is found to operate as behaviour. The concepts of behaviour and body are thus appropriated to one another: behaviour emerges as a totality and not as the result of a special part, and the body in its embryonic state already exhibits the holism of behaviour. In Gesell's application of these studies to the human embryo, there is a similar dual

23 cf. Coghill,G. E. *Anatomy and the Problem of Behaviour* (New York and London, Macmillan: 1929); Gesell A. and Amatruda, C. S. *The Embryology of Behavior: The Beginnings of the Human Mind* (Westport, Conn., Greenwood Press: 1971).

24 Merleau-Ponty, *N*, p.229.

25 Ibid.

movement: a naturalisation of behaviour, and a dynamising reinterpretation of embryogenesis. What allows this dual movement to integrate the opposed concepts of behaviour and body is precisely the concept of totality. Coghill and Gesell never seize upon this concept in its full significance. For Merleau-Ponty, however, it poses a problem that must become the object of a focused inquiry.[26] After presenting these scientific studies, he begins in a few brief pages to 'give some clues' as to a new type of solution to the problem of totality.[27]

This new solution first requires abandoning the idea of time that is operative in the 'substantialist' thinking of mechanism or finalism. According to a classical mechanism, any physical system is defined as a configuration of particles which is the necessary consequence of the state immediately preceding it; the future is therefore completely contained in the past. For a classical finalism, this situation is reversed: it is not the past pushing the system through time, but rather the future or *telos* pulling it toward itself. The future is contained in the past all the same, but as a superordinate guiding force. In either case, however, there is no such thing as genuine becoming. As in Bergson, in this consists the 'profound kinship of finalism and mechanism: Nothing happens, all is given.'[28] Both positions conceive the world as composed of a wholly positive being or a substance complete in itself, and therefore the condition of something new occurring would be the interruption of that order for a creation *ex nihilo*. In effect, just as there could be no true growth or development, time becomes the indifferent register of this massive circulation of one and the same being.

Against any 'substantialist' idea of time, the time proper to life is not completely constituted from the start, whether in actuality or in potential. There is instead a genuine becoming and a constituting movement of

26 The importance he attaches to it can be read in the following remark: 'What status must we give totality? Such is the philosophical question that Coghill's experiments pose, a question which is at the center of this course on the idea of nature and maybe the whole of philosophy.'(Ibid., p.145.).

27 Merleau-Ponty, *N*, pp. 152-8. 'Its solution will not be entirely defined for now, but at the end of these courses. We can at least give some clues.' (Ibid., 155.) This promise is never fulfilled, and the problem receives its fullest treatment in the 'clues' that immediately follow.

28 Ibid., p.236.

time. 'The future must not be contained in the present, but neither is it something which would be added on to the present by an *a tergo* necessity. The future would come from the present itself.'[29] The present of an embryonic Gestalt would be temporally oriented of itself, like the imminence of a perceived movement.[30] This is neither imminence as the necessary consequence of the spatial configuration of the present, nor is it imminence as the impending realisation of a goal that exists outside of space and time. It is the imminence of a totality which is not closed in itself but empty of what will follow. 'The totality grasped is not beyond space and time; it is perceived as the enjambing of what crosses space and time.'[31]

To recognise the organic reality of 'enjambment' would require abandoning the idea that each moment in the time of life can be regarded as a discrete reality or as a self-contained spatial configuration. It would mean seeing in that spatial configuration a factor of imbalance, a temporal articulation internal to it. This is only possible, however, if life is neither wholly within nor wholly beyond time; or, if it is simultaneously 'what crosses space and time' and an 'enjambing' that constitutes its own time. Merleau-Ponty expresses this in a working note to *The Visible and the Invisible*: 'Time must *constitute itself* — be always seen from the point of view of someone who *is of it.*'[32] This temporal divergence between constituting and constituted, 'enjambment' or 'imminence' and the present, is unified in the organism if we view it not only as a perceived movement, but from its 'point of view' as perceiving, living movement. The organism's living auto-movement would, from itself, form a temporal whole of which its present would be a part. It is in this way that the being of totality would be transspatial and transtemporal without for all that being transcendent.

The totality of the organism must therefore be conceived as a dynamic of auto-movement. This means that its present cannot be a fully positive and plenary being, which would only move into the future by virtue of an exogenous force pushing it from behind or pulling it toward its end. 'We

29 Ibid., p.152.
30 Ibid., p.154.
31 Ibid.
32 Merleau-Ponty, *VI*, p.184.

must place in the organism a principle that is either *negative* or based on *absence.*'[33] The negative principle in the organism is to be found in its bearing a totality which is absent from the organism at any given moment because it is a totality always to be achieved. It is this absence which drives the organism toward fulfillment. It appears as a task enjoining the organism to a performance, a question to which it must respond, a need for it to satisfy, or a perception calling it to movement. The principle of negativity or absence expresses the temporal orientation of vital structure in its circuit of behavior in a milieu. The organism-milieu circuit describes a circular and 'interrogative' process in which questions call forth responses, which produce new questions to respond to.

This circular structure is, however, deformed by the dynamic or temporal vector of life: there is a structural priority of the negative or of absence. 'There is a problem in life, and the problem is not only evoked when the solutions are already there. The negative principle is less identity-with-self than non-difference-with-self.'[34] The organism is originally in a state of lack or of difference with itself, and this principle of auto-movement is not abolished by the positivity of anything achieved. It does not lack in the sense of an economic balance that would return to zero when the lack is filled. 'There is a lack which is not a lack of this or that.'[35] The organism's lack corresponds to its holistic structure. It lacks a totality which is nothing in particular and which withdraws behind the particular things attained. We must say that what the organism lacks is not things, but a horizon of things — a *world*, which becomes present only by virtue of things but which withdraws into absence to the extent that they appear.[36] It is only the horizon of its proper world as such that can correspond to the excess lack in the organism. Since the presence of the world in the things attained also implies its horizonal absence, however, the opening in the organism can never be filled. Totality in the organism therefore consists of the desire initiated by its openness to the world, and for this reason it is a wholeness which is always lacking and which is only completed virtually in the world.

33 Merleau-Ponty, N, p.155.
34 Ibid.
35 Ibid.
36 This concept of the world figures prominently in Merleau-Ponty, *VI* and is largely borrowed from Heidegger.

Totality in the organism would thus receive a dynamic redefinition according to the concept of lack or of negativity as Merleau-Ponty describes it. He contrasts his identification of activity and negativity with similar notions in Spinoza and Hegel: 'Negation would not be synonymous with irreality [Spinoza] or with the principle that we may make work [Hegel], but with the principle that we would have to recognise as divergence [*écart*].'[37] Divergence is a core notion which Merleau-Ponty develops in his late writings to describe the relation of the invisible to the visible.[38] According to this idea, the invisible emerges from the visible as the establishment of a 'dimension;'[39] it is strictly neither visible nor non-visible, but a 'divergence' in relation to visibility. Especially in *Nature*, divergence indicates the relation of genesis or emergence: something emerges from an identity with something else to become distinct, and holds this identity and difference in tension. This application of the concept of 'divergence' to the organism needs to be interpreted.

In the organism, the invisible side of divergence designates its negativity. But in relation to which visible? It can only be in relation to the positivity of the animal body considered at one moment. The reciprocal character of body and behavior for Coghill and Gesell explains this instance of divergence. Behavior emerges at the most elementary organisation of the animal's body, and at the same time it is realised only as movements or postures *of* the body. The negativity of behavior would be the lack or the tension of the animal body that makes it have, of itself, an imminent future. Divergence therefore also means the organism's temporal divergence from its present. As Coghill describes this 'forward reference,'[40] however, it is the Gestalt of the organism that enjambs it to realise a particular articulation of parts at one moment. It is therefore also the Gestalt or totality that is a divergence in relation to its parts. The Gestalt is other than the sum of its parts without being another part: it is a 'divergence' of the parts. The concept of divergence would therefore appear to bring together a series of relations: negativity and positivity, behaviour and body, the time of life and the moment, whole and parts. These are all different ways of expressing the same organic reality: life is

37 Merleau-Ponty, *N*, p.157.
38 'The invisible is divergence [écart] in relation to the visible.' (Ibid., p.208.)
39 Ibid., p.156.
40 Coghill, *Anatomy and the Problem of Behavior*, p.92 ff.

'the establishment of a level around which the divergences begin forming.'[41]

How does this comprehensive idea of divergence address the ontological problem posed by vital structure? Already in *The Structure of Behaviour*, the concept of Gestalt introduced the following task: to think the relation between a whole and its parts in such a way that the whole is other or more than the sum of its parts without being another type of part. The concept of divergence by itself does not represent a solution, but rather another expression of the same problem of thinking an immanent whole. In the series of relations it brings together, however, it indicates the way toward a solution.

We stated earlier that Merleau-Ponty's return to the ontological problem of vital structure in *Nature* involved a 'rehabilitation of vitalism.' His new approach is indeed closer to vitalism than mechanism or projection, but it differs from vitalism in an essential respect: it issues from a rigorous attempt to think the properly vital element as the transcending or diverging dimension of the parts themselves. This is exhibited most concretely and convincingly in the relation between behaviour and the body as it appears in Coghill and Gesell: behaviour is an immanent whole in relation to the body. Vitalism for Merleau-Ponty fails to conceptualise an immanent whole like behaviour because it makes the organising principle of the organism either a real element of its spatio-temporal configuration or something beyond it entirely. The notion of behaviour as it has emerged here, however, requires thinking between these alternatives. Behaviour cannot be thought as a static or constituted phenomenon, either as a thing that would be present in a moment of space and time or as something that transcends space and time. The idea of a time original to life begins to articulate a temporality of behavior between these alternatives of 'substantialist' thinking. In this respect it offers something new to the debate between mechanism and vitalism by undermining the idea of time that makes these the only alternatives.

Merleau-Ponty's ontological characterisation of life has made it increasingly appear not as a special type of thing, but as an activity.

41 Merleau-Ponty, N, p. 238.

When substantialist thinking is applied to the problem of conceptualising an immanent whole, it tends to reify the whole in one way or another. Hence, it might be observed that this problem becomes irresolvable in principle if it is approached with the presuppositions of a classical mechanism or vitalism: on the one hand, the whole must be something other than a thing; on the other hand, it is not allowed to be anything other than a thing. For what is not a thing? Above all, it is precisely that which substantialist thinking has difficulty grasping: it is the reality of time or of activity. To make the whole a process or activity would therefore overcome the reifying tendency of a positivistic, substiantialist, or static thinking.

More than this, the thought of the whole in terms of activity implicates structures of time, the world, and desire in the definition of the organism in a way that is missed by mechanism, vitalism, and 'immanent signification'. In this way, Merleau-Ponty's 'clues' place life at the centre of a series of concentric problems, divergences to be explored. Life is no longer the province of a regional ontology, as it was in *The Structure of Behaviour*, but rather prepares in a primordial and original sphere the structural groundwork of the fundamental ontology that comes to orient Merleau-Ponty's later work. This can be seen in the way Merleau-Ponty's ontology of life in *Nature* reintegrates the problem of perception into an expanded problem of vital structure.

3.

In the preceding sections, the concept of Gestalt has functioned in two different ways corresponding to its ambiguous sense. In *The Structure of Behavior*, the Gestalt of life was approached as a 'subjective Gestalt'—an immanent signification. The Gestalt of life in *Nature*, though not strictly opposed to the perception of it, was determined as an 'objective Gestalt' — the establishment of a series of divergences. Here, life is no longer just an object of perception, but itself a 'subject' of perception: the organism lives, moves, and perceives, without this being the result of an organising perception exterior to it. Now we must consider whether these two modes of perception point to the same Gestalt: that is, whether it is possible to conceive the subject of perception, human and animal, as life.

This would not be possible without a fuller understanding of the integration of perception into the vital Gestalt subject. In fact, in other sections of *Nature*, Merleau-Ponty provides a basic framework for conceptualising such an integration. The unity of animal behaviour can be conceived in terms of the relations between perception and movement. It is starting in his discussion of the work of Jakob von Uexküll and continuing into the earlier sketches of the third lecture course that Merleau-Ponty suggests this relation as a model for animal behaviour. Perception and movement belong to the animal mode of life which Merleau-Ponty describes as 'interrogative being': the oriented movement of behaviour assumes something like a goal, which presupposes the ability to perceive it.[42] Perception and movement form a circuit of exploratory exchanges between the organism and its environment. This circuit is at work in the organism as a whole as well as in its different sensory-motor fields—vision, touch, etc.

It is in a marginal note that Merleau-Ponty provides a means of integrating behaviour, understood in this way as perception and movement, with the organism's structure of motivation as a whole: 'We do not move like a thing, but by a reduction of divergence, and perception is only the other pole of this divergence, maintained divergence [*écart*].'[43] Movement and perception here are thought as the poles of a divergence. Perception would be correlated with the divergence maintained or expanded, and movement with its reduction. Now, as we described it above, the organism at any given moment 'diverges' from its virtual whole, or from what it lacks. We could thus say that animal perception establishes this divergence of the organism from what it lacks. Its movement would be the attempt to reduce the divergence, but since movement gives rise to new perceptions, the divergence could never be reduced without producing new divergences. In this way, perception and movement would be the expansion and reduction of the same divergence: the divergence between the organism and the world that it lacks.

42 Cf., Barbaras, R. *Desire and Distance: Introduction to a Phenomenology of Perception*, trans. Paul Milan (Stanford, Stanford University Press: 2006), p.87.

43 Merleau-Ponty, *N*, p.222n1. The importance of this note cannot be overestimated. Barbaras, for one, has claimed that it is 'the most radical thing Merleau-Ponty wrote regarding perception'. (Barbaras, *Desire and Distance*, p.96.).

This integration of perception with the structure of motivation is confirmed in the third lecture course, where Merleau-Ponty writes: 'The esthesiological structure of the human body is thus a IIbid.inal structure, perception a mode of desire, a relation of being and not of knowledge.'[44] This notion of perception must be grasped in its full significance. If perception is a mode of desire, then it cannot be conceived as a detached observation annexed to a separate structure of motivation. Perception must be extended to the whole of the organism's behaviour and not only to the level of its 'consciousness' or 'awareness'.[45] Moreover, if the divergence that perception expands is precisely a divergence to be reduced by movement, then perception would take shape from its integration with movement: it would not serve an autonomous *cogito* but rather an activity of moving and living. By being integrated with movement into behaviour, then, perception becomes more than itself, more than 'perceiving' proper. Animal behaviours 'deposit a surplus of signification on the surface of objects.'[46] The perceived thing would be determined not only by its diacritical relation to other perceptions—by its perceptual symbolism — but also by a diacritical relation to the whole thickness of past and future behaviours—by a vital symbolism. Perception would not be a self-contained seeing, but a mode of living. In this case, we would have to conclude that the subject of this perception is life.

If we consider perception in its integration with the organism's structure of motivation in this way, then the order of priority between the problem of perception and the ontological problem of vital structure is reversed. Rather than being 'reducible to the problem of perception', it would appear that the problem of perception is reducible to this expanded ontological problem of vital structure. But it will be objected that the

44 Ibid., 210. The English edition mis-translates this sentence, '*La structure esthésiologique du corps humain est donc une structure IIbid.inale, la perception un mode de désir, un rapport d'être et non de connaissance*', rendering it as, 'The esthesiological structure of the human body is thus a IIbid.inal structure, the perception of a mode of desire, a relation of being and not of knowledge'. Cf., Merleau-Ponty, M. *La Nature: Notes Cours du Collège de France* (Paris, Éditions Du Seuil: 1995), p.272.

45 As Merleau-Ponty writes elsewhere, 'Consciousness is only one of the varied forms of behavior; it must not be defined from within, from its own point of view, but such as we grasp it across the bodies of others'. (Merleau-Ponty, *N*, p167.)

46 Ibid., pp. 172-3.

human being cannot be reduced to life so easily. It is not, however, in order to effect a biological reductionism that Merleau-Ponty approaches the ontology of the human being by way of life. He does so for the same reason that he approaches the being of the organism by way of its embryogenesis: in order to 'reduce' the ready-made solutions of mechanism and vitalism, or of empiricism and intellectualism. That this motive is at work becomes evident if we look at the *résume* written after the first lecture course on nature: 'In returning to the philosophy of nature, we only seem to be looking away from these fundamental problems [of spirit]; in fact, we are trying to lay the ground for a solution to them which is not *immaterialist*'.[47] Life can only be grasped as a divergence of matter rather than a vital substance if we grasp it in its material genesis. For the same reason, the human being can only be apprehended in its properly vital dimension if we find it at the point of its emergence in life.

This approach to the ontology of the human being is not an isolated methodological experiment of *Nature*, however. The reconfigured subject of perception that issues from these studies is especially suited to meet the requirements of the descriptions in *The Visible and the Invisible*. The primary difficulties in interpreting the latter text arise when we approach it from the perspective of the 'subject of perception' as it is determined in *Phenomenology of Perception*. But Merleau-Ponty's description of perception in his last work is fundamentally incompatible with the notion of perception as an intentional experience of consciousness. What is largely lacking from the descriptions, however, is a positive account of the 'non-consciousness' of sentience. This is precisely what is given in the ontology of life in *Nature*. In *Phenomenology of Perception*, perception does indeed acquire depth by being determined in terms of the body; but the ontological status of the body sustains an ambiguous significance which vacillates between consciousness and its negation. The vital level of perception, however, more fully provides a positive sense of non-consciousness in perception, primarily by determining perception in its integration with movement in the total structure of the organism's relation of motivation with its milieu. Perception at the vital level, before being consciousness of ... , means being at a distance and

47 Merleau-Ponty, M. *Themes from the Lectures at the Collège de France 1952-1960*, trans. John O'Neill (Evanston IL., Northwestern University Press: 1970), p. 62.

desiring its reduction. From this perspective, human aesthesiology—the flesh—could be interpreted as a morphological variation on life itself.

Conclusion

In the preceding investigation, we have seen how the development of Merleau-Ponty's concept of life comes to reconfigure the constitutive relations of perception and being, thereby also challenging the received antinomies that his philosophy seeks to question. Life appeared first in *The Structure of Behaviour* as an irreducible type of subjective Gestalt, but the inadequacy of this position necessitated an approach to the objective Gestalt of life apart from its perceptual manifestation to the consciousness that knows it. We found this approach to life in the second lecture course in *Nature*, where life is dynamically redefined through the fundamental concept of divergence. Here perception was reconceived as a mode of the behaviour that 'diverges' from the animal body, and perception was thereby integrated into the structure of motivation in its organismic whole, enabling us to discover a vital subject of perception.

If we construct the development of the concept of life in this way, it becomes evident that Merleau-Ponty's ontological project converges on the figure of life. But this is only possible because, rather than being the site where all opposed elements converge on an all-embracing monism, life for Merleau-Ponty is the site of the divergence of the opposed elements — perception and being, sentient and sensible, behavior and body. Life according to the concept of divergence therefore enacts a rapprochement between monism and dualism. From the perspective of his thought of life, then, the question of whether Merleau-Ponty ultimately settled on monism or dualism receives an equivocal answer: the unitary term is itself double. But this equivocity is a necessary consequence of the refusal of the 'positive' oppositions of a 'philosophy of substance'. Rather than being something unitary or double in itself, life is defined by a holism of activity which is never quite one or the other, or which is precisely a mobile process of becoming one or the other. Monism or dualism in this sphere would represent a stoppage of the pure mobility which is the principle of their *rapprochement*.

If we take this notion of life seriously, we find in Merleau-Ponty's thought an unsuspected element that deserves further examination. The Merleau-Ponty of *Nature* is not primarily engaged in carrying out the phenomenological project established in its essential form by Husserl or Heidegger. Rather, in the curious synthesis of phenomenology and vitalism which issues in Merleau-Ponty's ontology of life, he is engaged in an original critique of the ontology of substance, and in this respect his thinking has more in common with philosophers like Bergson and Whitehead. The ontological project of reconceiving the received oppositions finds its deepest fulfilment in Merleau-Ponty's ontology of life, because it is there that the true opposition is decisively established—that between the ontology of substance and the ontology of form, structure, or Gestalt.

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The Trembling of the Concept: The Material Genesis of Living Being in Hegel's *Realphilosophie*

JOSEPH CAREW

Introduction

In the reception of the Hegelian system, the philosophy of nature has come under great scorn. Whether it be Schelling's[1] or Feuerbach's[2] critique of the 'deduction' of matter, Kojève's rejection of the project,[3] Habermas' denouncing of its methodology,[4] or, more recently, Žižek's criticism of its program[5] or Iain Grant's sustained argument for the superiority of Schelling's naturephilosophy,[6] one thing is clear: there is a general suspicion about Hegel's 'absolute idealist' account of nature. This article is an endeavour to fight against such tendencies by demonstrating the relevance of the Hegelian program for thinking the concept of life, a concept which is not only reappearing in the new speculative turn of Anglophone philosophy, but also in analytic[7] and phenomenological circles.[8]

Taking as my guide the conceptual category of 'trembling' [*Erzittern*] in the philosophy of nature and the autopoietic notion of self-referentiality, my aim is to reconstruct Hegel's understanding of the relationship between living, self-positing interiority (ideality) and the purely mechanical self-externality of nature (reality). If one of the major achievements of the *Logic* is to have shown that it is possible to think that there is no absolute distinction between the two insofar as the former can only exist by relating to the latter as its freely posited milieu, so that both are held together by the freedom of self-reference in an immanently generated field, it is only by confronting this ideal structure with the material reality of the world as investigated in the *Realphilosophie* that its wider ontological and dialectical implications come to the fore. What we see in the latter is that self-referential activity – which has numerous avatars in Hegel including self-referring negativity, ideality, the concept – signifies a highly complex manner of being, that of *self-determining determinacy*, which is irreducible to, yet dependent upon, the matter

1 For Schelling's critique of Hegel, see Schelling, F.W.J. *On the History of Modern Philosophy*, trans. Bowie, A (Cambridge, Cambridge University Press: 1994), pp. 134-163, especially pp. 134-135 & 145. For an excellent reading of the critique, see Houlgate, S. 'Schelling's Critique of Hegel's Science of Logic,' *Review of Metaphysics*, 53 (1999), pp. 99-128.

2 See Feuerbach, L. 'Provisional Theses for the Reformation of Philosophy' (1843), in *The Young Hegelians: An Anthology*, ed. Stepelevich, L.S (Atlantic Highlands NJ, Humanities Press: 1983), pp. 165-167.

3 Kojève criticises Hegel for his 'absurd philosophy of Nature, his insensate critique of Newton, and his own 'magical' physics which discredited his system,' Kojève, A. *Introduction to the Reading of Hegel*, trans. James H. Nichols, Jr. (Ithaca, Cornell University Press: 1969), pp. 146, 212fn15.

4 As Habermas argues: 'It is with Hegel that a fatal misunderstanding arises: the idea that the claim of philosophical reason is equivalent to the usurpation of the legitimacy of independent sciences.' Haberman, J. *Knowledge and Human Interests*, trans. Jeremy J. Shapiro (London: Heinemann, 1978), p.24.

5 See Žižek, S. *The Ticklish Subject: The Absent Center of Political Ontology* (New York: Verso, 2000), p. 70ff. For a reading of this critique, see my 'The Grundlogik of German Idealism: The Ambiguity of the Hegel-Schelling Relationship in Žižek', *International Journal of Žižek Studies*, Vol 5, No 1 (2011).

6 See Grant, I. *Philosophies of Nature after Schelling* (New York: Continuum, 2006).

7 For instance, not only has Michael Thompson recently written a book on the ontological status of natural and human 'life', but he even interprets his own project as a reading of Hegel in the light of Frege. See Thompson, M. *Life and Action: Elementary Structures of Practice and Practical Thought* (Harvard University Press, 2008).

8 Largely due to Michel Henry and Patocka, the phenomenological importance of life is becoming a more and more pressing problematic. For a new attempt to tackle the problem, see Barbaras, R. *Introduction à une phénomenologie de la vie* (Paris: Vrin, 2008) and his recently published *La vie lacunaire* (Paris: Vrin, 2011).

which serves as its ontogenetic ground. But this activity does not insert itself out of nowhere from a pre-existent zone beyond the world: there is a slow, painful process of the *material emergence* of the concept as living self-referentiality as it attempts to beget itself, through an immaculate conception, out of/within the contingency of matter as the horrifying abyss of its non-existence, a process which Hegel describes as a *trembling*.

If the absolute idealism of the *Logic* is taken to be an investigation into the pure structure of self-referentiality as such – the very possibility of its objective existence as simultaneously thematised and covered up by Kant in his discussion of teleological judgements[9] – then it cannot be the true starting point of the system. If the latter is to have theoretical weight, then the very pure structures that the *Logic* describes must independently *come to be* as being moves from the chaotic flux of self-externality to the freedom of self-positing interiority through the former's self-effacing auto-limitation.[10] In other words, Hegel's philosophical position is anything but an idealism that precedes material reality and, thus, has no need for said material reality. It follows that the primacy of the *Logic* in the development of philosophy as an encyclopaedic science must be questioned and the status of the *Realphilosophie* in the system brought to the foreground; and, more radically, once we do this we see that the *Realphilosophie*'s fundamental claim is that the ideal structures do not

9 'In dealing with this highest Idea [teleological causality, which Kant reduces to a heuristic fiction], however, the laziness of thought, as we may call it, finds in the 'ought' an all too easy way out, since, in contrast to the actual realisation of the final purpose, it is allowed to hold on to the divorce between concept and reality. But the presence of living organisations and of artistic beauty shows the actuality of the Idea even for the senses and for intuition'. Hegel, G.W.F. *Werke in Zwanzig Bänden*, eds. E. Moldenhauer et K. M. Michel (Frankfurt am Main, Suhrkamp, 1969-1971), volume 8, §55A, p.140. Hereafter *W* followed by volume number. See also Hegel, G.W.F, *The Encyclopaedia Logic (with the Zusätze)*, trans. T. F. Geraets, W. A. Suchting, and H.S. Harris (Cambridge, Hackett Publishing Inc.: 1991), p.101. Hereafter *LL*. I have often slightly modified translations whenever I have found them lacking precision, needing changing due to my own reading of the German texts, or in order to keep consistency in technical terms, each time putting in square brackets the original German.

10 Hegel, *W* 9, §246, p.18; Hegel, G.W.F, *Hegel's Philosophy of Nature,* trans. A. V. Miller (Oxford, Clarendon Press: 2000), p.9. Hereafter *PN*.

have reality until reality itself becomes self-referential, that is, living or thought-like.

1. The self-externality of nature

The point of departure for Hegel's *Philosophy of Nature* is 'the idea in the form of *otherness*.'[11] This has two major implications: (i) the categories deduced in the logic cannot be presupposed as ready-to-hand, but must independently bring themselves forth through the observation of nature; (ii) the logical beginning of the philosophy of nature is *not* a solipsistically self-grounding idealism, but *a realism* of nature, that is, nature as opposed to ideal mediation insofar as it lacks all self-referential structure.[12] One major consequence is that the standpoint of absolute idealism must be won, not dogmatically asserted, with respect to nature – it must turn out to be a result of the latter's auto-development.[13] Nature must make herself into life, into idea; self-reflexivity must somehow emerge not only from where it does not exist, but from where it is foreclosed. This is, in short, another side of Hegel's repeated use of the expression *the work of the concept*.

Consequently, the *Logic* does not supply a metaphysical first principle, a type of Platonic Idea, from which everything emanates. Hegel's critique of Schelling's naturephilosophy is helpful for establishing this once and for all. Criticising Schelling for deducing all physical and biological forms out of the original creativity of nature as the truly a priori, Hegel argues that, instead of merely deducing nature and spirit from one another, we must develop a logic capable of thinking the mediative relationships that hold between the two.[14] Hegel's task in the *Logic* is to

11 Hegel, *W* 9, §247, p.24 (Hegel, *PN*, p.13).

12 William Baker also offers an argument for Hegel's realism in the *Philosophy of Nature*, but in a different spirit than mine own. Cf. 'The Very Idea of a Philosophy of Nature' in Houglate, S. ed., *Hegel and the Philosophy of Nature* (New York, SUNY: 1998), pp. 1-28.

13 I prefer to speak of 'auto'-development than 'self'-development because there's precisely no self visible in the initial logical constitution of nature. The 'self' only posits itself within an anonymous process that not only precedes it, but also, in its beginning, lacks any clear systematic inner articulation as a self-organising totality, the latter being co-extensive with what Hegel means by 'self'.

14 For a noteworthy reconstruction of the Hegel's critique of Schelling, from which I draw upon my reading of the Logic, see Renaut, E. *La Naturalisation de la*

think, in its pureness, the dynamicity of such a mediative field (the idea) that can bind together these two opposing domains (nature and spirit) without deriving them from a more ultimate power, ground, or principle. The logic doesn't offer us a *vertical* system of priorities with the logical as such at the highest position, degrading itself bit by bit to the ephemerality of the real through an onto-theological grounding; rather it gives us the possibility of a *horizontal* system of multiple, irreducible two-way interactions within a complex plan of immanent relations lacking the linear hierarchical structuration of a classical metaphysical system. As Hegel was well aware, this dialectical 'entangling' would prevent any sharp distinction between the real and ideal: 'The opposition between idealistic and realistic philosophy is therefore without meaning.'[15] The sequential ordering of the system into *Logic*, *Philosophy of Nature*, and *Philosophy of Spirit* – the first syllogism at the end of the *Encyclopaedia* – is nothing but an 'apprenticeship', a training,[16] and therefore must be fleshed out by the dynamical circuitry of the actual relationships holding between nature and spirit.[17] The *Logic* can only make such dynamicity thinkable via a critique of categories; the task of establishing it is the *Realphilosophie*.[18]

To say that nature exists as if it were the idea in the form of otherness is to simultaneously proclaim nature's impotence, which is a direct consequence of nature's inability to hold itself up to the rigour of the concept understood as such a dynamic field of immanent relationality. As free development – the form of self-referentiality *tout court* in its teleological purposiveness as indicative of a circulatory causality wherein each part constitutes the whole which in turn constitutes them – the concept's self-positing interiority is liberated from the contingency of external relations: the concept determines itself *autonomously* in all dealings with the world, but in such a way that its subjectivity *only* exists in/through the externality of its objectivity. The concept always relates to itself even in relating to its Other and is such that it is only itself by

Dialectique (Paris: Vrin, 2001), pp. 79-87.

15 Hegel, *W*5, p.172; Hegel, G.W.F, *The Science of Logic*, trans. George di Giovanni (Cambridge, Cambridge University Press: 2010), p.124. Hereafter *GL*.

16 Cf. Malabou, C. *The Future of Hegel: Plasticity, Temporality and Dialectic*, trans. Lisabeth During (London Routledge: 2005), pp. 139-142.

17 Hegel, *W* 8, §24Z1, p.84 (Hegel, *LL*, p.58).

18 Hegel, *W*8, §43Z, p.120 (Hegel, *LL*, pp.86-87).

doing so. Within it there is no indivisible remainder and no usurping beyond (there is nothing but the dynamic field of immanent relationality): 'Hence, what is only *something-internal*, is also (by the same token) *only something-external*; and what is *only* something-external is also as yet *only something-internal*.'[19] Nature, on the other hand, is characterised by a radical *self-externality*: lacking any kind of self-mediation, any logical core which could sustain the dialectical interiority necessary for the autonomy of self-referential activity, it has the ground of its being in an *infinite elsewhere*. It is *pure extimacy*: it is *not* in itself absolute, an infinitely powerful substance, insofar as it is constituted by an *irreducible* self-diremption, a diremption so radical that there is not even a 'self' to dirempt. If one peels away its layers, instead of finding a palpitating core of vitality, only the deafening silence of the void is to be found. In this sense, if the latter parts of the *Philosophy of Nature* are concerned with the realm of the living, the early parts are concerned with the realm of the dead.

It is precisely for this reason that Hegel speaks on numerous occasions in the *Philosophy of Nature* of the necessity of *monstrosities*, *abortions*, *sicknesses*.[20] If nature has no intimate core, no vital impulse, but is rather the senseless buzzing of matter in its pure contingency, having absolutely nothing to do with the self-referential activity of the organic, then the movement from the desert of reality to the qualitative experience of living being can never be smooth. Nature is weak, unpredictable, and fails at every level to posit itself as a living dynamic without points of fissure. The emergent plane of immanent mediation that contingently emerges within nature constantly feels an infinite internal pressure jeopardising it – and it often is jeopardised: *nature fights against it*.[21] Everything that has successfully struggled to emerge from nature as a consistent entity with minimal self-reference has a tendency to fall back

19 Hegel, *W*8, §140, p.274 (Hegel, *LL*, 209). Taken from the section on actuality [*Wirklichkeit*].

20 Monstrosities and abortions appear in various places in the philosophy of nature. See for instance: Hegel, *W*9 §250, pp.34-36 (Hegel, *PN*, pp.22-24); §368A, p.502 & Z, p.512 (§370A, p.416 & Z, p.425); and §371Z, p.522. Sickness even constitutes an entire standalone part of Hegel's text: see *W*9 §371, pp.520-535 (Hegel, *PN*, pp.428-436).

21 See for instance, Hegel, *W* 9 §244Z, p.14 (Hegel, *PN*, p.5); §258A, p.49 (35); §371Z, p.522 (430).

into the void of extimacy: always present, it threatens to devour any vestige ideality that comes into existence; death has a tendency to wipe out any trace of the living. Accordingly, nature is in no way an overarching harmony: being exposed in their essence to radical, irremovable contingency, '[t]he forms of nature, therefore, cannot be brought into an absolute system.'[22] Nature's basic level is an irreducible self-externality that stands in opposition to any totalising order, but interestingly, it is exactly this contradiction or internal tension which spurs it on to new forms.[23] Hegel tries to show how this primordial *failure* of nature (it being nothing but the inhospitable land of the dead) could have retroactively proven itself to be the paradoxical ground for *triumph*, the event of the ontologically unexpected (the birth of the living); that is, how the dialectical auto-development of the extimacy of nature towards its other, spirit as intimacy, by means of its own tension-ridden determinacies could have taken place.

2. The material genesis of self-referentiality

The first determination we come across in the *Realphilosophie* is 'the abstract *universality of nature's self-externality*,'[24] the fundamental form of which, according to Hegel, is that of *space*. As the zero-level of nature, this being-outside-itself constitutive of space is nothing but a mere mutual externality (*Außereinandersein*) and juxtaposition

22 Hegel, *W* 9, §368Z, p.503 (Hegel, *PN*, §370, p.418). Consequently, the arguments of interpreters such as Frederick Beiser who argue that Hegel's philosophy of nature defends an organic view of the world in the spirit of Schelling and the Romantic naturephilosophers should therefore be qualified. Cf. Beiser, F. 'The Organic Worldview,' in *Hegel* (New York, Routledge: 2005), pp. 80-110.

23 My own reading of the role of tension in Hegel has been greatly influenced by conversations with Søren Rosendal. The forms of nature unfold by means of an inner tension, a conflictual non-coincidence that retroactively prove themselves as being productive in their very viscisstudes, and which thereby form the very dynamical basis for dialectical movement. This is the true insight beyond substance as subject, for a substance which coincided with itself would be a 'Big Crunch'. For something similar in the literature see Allison Stone's *Petrified Intelligence: Nature in Hegel's Philosophy* (New York, SUNY: 2005), pp. 60-67. Although I have reservations about Allison Stone's reading of the philosophy of nature as an priori rationalist metaphysics deducing the forms of nature, I largely agree with her account of Hegelian contradiction [*Widerspruch*] as tension [*Spannung*].

24 Hegel, *W* 9, §254, p.41 (Hegel, *PN*, p.28).

(*Nebeneinander*), a 'mediationless indifference',[25] which can only attain an immanent differentiated unity via the *negative* differentiation of its parts – and the name of this negative process is *time*. Not only do space and time show themselves as primordially *one*,[26] so that they make up one single continuum, but they also constitute the fundamental determinacy of 'matter, this universal basis of every existent form in nature,' which 'offers resistance' to itself because it 'holds itself asunder against its own self.'[27]

Nature is not a mere quantitative system of *partes extra partes* stretching out unto infinity, but is more primordially contaminated by negativity: rather than coming up against a purely extensional field in a state of utter neutrality, we are confronted with an intensive battle wrought by tension. But this extensive-intensive field is incapable of high-level auto-structuration: all we encounter are material quasi-entities existing in contingent interactions that come and go, but are incapable of self-production. This 'spurious infinity' of Somethings and Something-Others is chaos at its purest, with no necessity whatsoever underlying or regulating it,'[28] there only being a spatio-temporal material flux within mechanical nature wherein self-positing interiority is excluded. Because of this fundamental tension, the determinacy of the real is not only 'self-external' but also 'related to negativity as to the power that dominates it,' to the '*Chronos*, from which everything is born and by whom its offspring is destroyed.'[29]

i) Mechanics

The abstract universality of nature therefore constitutes a mechanistic domain of partially formed entities that, although they can be said to exist insofar as they are determinate, are by no means capable of standing

25 Hegel, *W* 9, §254, p.41 (Hegel, *PN*, p.28).

26 Ibid., §257Z, p.47 (Hegel, *PN*, p.34).

27 Hegel, *W* 10, §381Z, pp.18-19; Hegel, G.W.F. *Hegel's Philosophy of Mind*, trans. William Wallace and A. V. Miller (Oxford: Clarendon Press, 1988), p.9. Hereafter *PM*.

28 Slavoj Žižek and Ben Woodard, 'Interview,' in *The Speculative Turn: Continental Materialism and Realism*, eds. Levi Bryant, Nick Srnicek and Graham Harman (re.press, Melbourne: 2011), pp. 406-415, here p.413.

29 Hegel, *W* 9, §258A, p.49 (Hegel, *PN*, p.35).

on their own (being *selbständig*) as autonomous beings that relate to themselves and others. Their relationship to one another is by no means neutral or cold – they are not merely *external* or *asunder* [*Außeinander*] with respect to one another – but is fundamentally *chaotic* [*Durcheinander*]. There is no immanent field of relational-mediative dynamicity always requiring the existence of a self as a logical and free centre: lacking any self-moving interiority, material bodies stumble against one another in a mayhem of uncoordinated flux – ontological madness at its finest – which leads to the continual production of new bodies, a process which Hegel calls *attraction*. But because matter itself is a *being-outside-itself*, pure extimacy, it fights against this spontaneous genesis of quasi-entities. The primordial negativity of nature cannot be so easily overcome: matter 'is spatial separation; it offers resistance and in so doing repels itself from itself: this is *repulsion*.'[30] One body arises in a momentary metaphysical explosion only to fall back into the void – *this* is the true cyclic palpitation of nature, a macabre dance of diastoles and systoles whimpering under its own weight. Nature's condition of possibility coincides with her condition of impossibility: *she is always gasping for breath.*

But taken together, this twofold activity auto-limits itself in what Hegel calls *gravity*, as bodies begin to develop subsistence [*Bestehen*]: 'Gravity constitutes the substantiality of matter; this itself is the *nisus*, the striving to reach the *centre*; but – and this is the other essential determination of matter – this centre falls *outside it*.'[31] The logical structure of nature's wild being-outside-itself is such that she is explicitly in tension with herself: self-externality is an *inconsistent* logical category of determinacy because it leads to a spontaneous upsurge of quasi-entities *that display a minimal interiority*. Although nature is pure extimacy, she gives birth to bodies in relative rest, and thereby overcomes herself. But this subsistence is fragile. Striving for a *centre* outside of themselves, this new determinacy fails – one tension is changed for another – because the found centre is paradoxically always *somewhere else*: 'Although gravity is a mode of the inwardness of matter and not its lifeless externality, nevertheless this inwardness does not yet have its place here; matter is still that which is without inwardness, is the concept of the conceptless

30 Hegel, *W* 9, §262Z, p.62 (Hegel, *PN*, p.46); my emphasis.
31 Ibid., §262, p.62 (Hegel, *PN*, p.45).

[*der Begriff des Begriffloses*].'[32] Yet, we begin to glimpse the beginning of a 'material reflection-into-self'[33] as the primordial extimacy of nature carves up a precarious ideal interiority. Chaos is productive in its wild blindness.

ii) Physics

Although nature as pure chaos fights against any emergent order, the self-relational feebleness of mechanics paves the way for physics, in which 'a relationship of reflection whose being-within-self is natural *individuality*'[34] for the first time comes on the scene. '*Ideality* here attains [or, rather, comes into: *kommt zur*] *existence*,'[35] in a moment that establishes the first traces of a new age of the world in being. What is decisive here is that Hegel does not need any *presupposition* of an implicitly existing ideality in order to think its logical possibility of genesis: from within the determinacies of mechanics and their inner limitation he shows show how these structures can radically remodulate themselves and give rise to something previously *impossible*.

Here we encounter the radical dialectic of the philosophy of nature. As already indicated, the zero-level of nature is not, in stark contrast to Spinoza, a self-unfolding productivity. This also implies that there is no inchoate greatness to be awoken from its eternal slumber, a divine joy of nothingness that has to be disturbed to fully realise itself.[36] There is no shift from mere *potentiality* to *actuality*. Not only does the movement from (i) immediacy → (ii) negation → (iii) negation of negation *not* constitute a return to the first (something irreducibly different and operatively new emerges, irrevocably reconfiguring the entire logical/ontological apparatus), but it also excludes the need to posit something outside of the auto-movement of negativity to explain the dialectical-natural process: the negativity of the second is always inscribed within the first, arising immanently from within its (relatively) closed immediacy as a kind of internal tension. For Hegel, it is this

32 Ibid., §262Z, p.63 (Hegel, *PN*, pp.46-47). Translation modified.
33 Ibid., §262A, p.62 (Hegel, *PN*, p.45).
34 Ibid., §252, p.37 (Hegel, *PN*, p.25).
35 Ibid., §298, p.168 (Hegel, *PN*, p.134).
36 Hegel's project, therefore in stark opposition to that of the Schelling of the *Ages of the World.*

deadlock of non-coincidence that serves as the dialectical spring-board by creating the space necessary for the unpredictable founding of a new order; but it only becomes explicit in the third as it usurps the primacy of the first through the paradoxical causality of a *retroactive* positing of presuppositions. With the self-positing of the third (the second positing itself as such *within* the first), negativity immanently reconfigures the (onto)logical field within which it occurs by establishing itself as the supreme category for the effectuation of determinacy. Here we should acknowledge, however, that this self-positing *always comes too late*: its upsurge posits itself at the logical beginning of the movement as necessary, as that to which the movement had always tended, but only *après-coup*. The painful vicissitudes of tension, its dark 'pre-history', which may or may not lead to the immaculate conception of a new register, vanish from sight – it covers up the fact that the very act of self-positing of the third moment inscribes a virtual potentiality into the first moment, *which never existed before this act itself*. We often overlook that, in the necessity of the logico-dialectical movement, the very positing of necessity is *in itself a contingent act*, a purely retroactive gesture of taking away one's own ground as that which is other to oneself.[37] This is what Hegel is getting at when he says: 'Nature is the first in time, but the absolute *prius* is the idea.'[38]

In virtue of gravity, bodies finally achieve a real subsistence, a relatively stable self-sustaining qualitative unity that is able to penetrate all of their parts. No longer indifferent vis-a-vis the latter, bodies try in various ways to *recollect* or *interiorise* [*er-inner-n*] themselves in such a way that they simultaneously free their parts from the externality of pure matter by negating the latter's independence through its sublation as a moment within an ideal whole. Because of this movement, we see the first traces of what we could retroactively call *autopoietic self-reference*: by attempting to subsume their external parts within some kind of systematic unity or interiority, bodies not only attempt to dissolve the brute reality of the materiality constituting their parts by establishing an

37 Just as substance as subject should be counterbalanced by subject as substance (see Henrich, D. 'Hegels Logik der Reflexion,' in *Die Wissenschaft der Logik und die Logik Reflexion*, ed. Henrich, D [Bonn, Bouvier Verlag Herbert Grundmann: 1978], pp. 203-326, here pp. 206-218), so should the necessity of contingency be supplemented with the contingency of necessity.

38 Hegel, *W* 9, §248Z, p.30 (Hegel, *PN*, p.19).

inner connection amongst them through a process of inner structuration, but the ideal whole that is at the apparent origin of said process actually only emerges by means of relating to itself *in/through the materiality of its parts which it causes to come together in an articulated totality*. The idea (the dynamic field of immanent relationality) is not something over and above matter that informs the latter (the dead field of pure objectivity): the two exist in a complex dialectical relationship where it is the very transmutation of chaotic materiality that gives birth to the idea as a self-referential activity that which makes matter itself 'secondary' according to its own freedom. This recollective interiorization [*Er-inner-ung*] is a process of uneasy *self*-begetting, *self*-development, the first that we see in the philosophy of nature. Note however the paradoxical nature of first-level 'ontogeny' of consistent entities in/out of matter: this recollection is not a mere remembering of something in cosmic memory, an always already existing but non-actualised self, a movement from the implicit to the explicit – the very gesture of interiorisation *is that which creates what is recollected*, the ideal point to which all things are drawn, in such a way that the recollected self or interiority retroactively posits itself as that which was always at the starting point in a movement comparable to Baron Münchhauser's pulling himself up out of the swamp by his own hair.

It is in this precise sense that gravity is a premonition of what will later be the interiority of the concept. There is something ideal in the immanent *striving* of matter to find a centre, recollect an interiority, insofar as bodies posit *themselves* as a *self-referential* core and hence as self-mediative, as free with regard to the externality of their environment. They *idealise their world*, even if said world must be poor, for in the internal cohesion of bodies we see 'another mode of the spatial juxtaposition of [...] material parts' that is 'a peculiar *mode of resistance* in the mechanical comportment [*Verhalten*] to *other* masses.'[39] Here we see the radicality of Hegel's 'materialism': we have already hit the internal limits of a raw mechanistic world-view. The hegemony of mechanics as purely external relationality (a linear causality rigidly isolating cause from effect) has been in some basic way sublated (the effect tries to develop itself into its own cause by overtaking its own ground). The wild, chaotic ex-timacy of nature has given way to an

39 Hegel, W 9, §295, p.163 (PN, p.130). Translation modified.

indistinct, mediating field of spectral intimacies. We even hear the ghostly whisper of such primitive quasi-subjects in the sound of objects:

> When a body sounds, we feel that we are entering a higher sphere; sound affects our innermost feeling. It speaks to the inner soul since it is itself inner and subjective. Sound by itself is the self of the individuality [...] which is merely this: that this soul is now posited as one with the material body and dominating it as a calm subsistence [*ruhiges Bestehen*]. What is here revealed is not based on matter for it does not have its objectivity in anything material.[40]

At this juncture of the first stirrings of ideality within being, Hegel introduces a conceptual category highly revelatory of the relationship between reality and ideality. When we encounter the sound of bodies we directly perceive their ideal interiority that, strictly speaking, *transcends* the raw flux of matter at the zero-level of nature, but transcends it in a very specific manner, for it is a transcendence which has emerged through the latter's *immanent auto-sublation*. The form of this internal remodulation – an ontological overhauling of nature's determinacy from within – shows itself to be the *trembling* or *vibration* [*Erzittern*] *of matter*, Hegel here making use of an untranslatable play of words in German

> this at first *inward form*, emerging from its submergence in material asunderness, becomes *free* in the *negation* of the self-subsistence [*für sich Bestehen*] of this its asunderness. This is the transition from the material dimension of *space* [*materielle Raumlichkeit*] into the material dimension of *temporality* [*materielle* Zeit*lichkeit*]. Because this form thus exists *in a trembling or vibration* [*Damit, dass diese Forme so* im Erzitern] – i.e., through the equally instantaneous negation of its parts and negation of this negation of them, the two being so linked that one evokes the other [...] – this simple form, as the *ideality* of material body, achieves *independent existence* and comes, as this mechanical soulfulness, into manifestation [*kommt als diese mechanische Seelenhaftigkeit zur Erscheinung*].[41]

40 Ibid., §300Z, p.173 (Hegel, PN, p.138). Translation modified.
41 *Ibid.*, §300, p.171 (Hegel, *PN*, pp.136-137). Translation modified.

To say that ideality is nothing other than matter's own trembling or vibration is to reinforce the Hegelian denial of an absolute opposition between idealism and realism. If reality is, at its most basic level, the chaotic extimacy of nature, then ideality must be understood as nothing other than an emergent type of immanent self-relation within the extimacy of reality itself. There is nothing external to matter and its vicissitudes. The point here is not so much the sound itself – that things can produce various kinds of senseless noise when colliding with one another – but rather that its experience puts us in an immediate contact with that which is in matter more than matter itself, namely, its spiritual core which enables a body as a specific ensemble of parts to be able to resist destruction in the material flux of the world in virtue of its capacity for self-relation, self-reference, self-preservation.

The play on words inherent in Hegel's usage of *Erzittern* highlights two features of ideality that are of irreducible importance for understanding the *Philosophy of Nature*. Firstly, ideality as the vibration of matter expresses the fact that, although ideality is in a certain sense *non-material*, it is paradoxically *nothing but matter itself*. Ideality cannot be construed as a separate ontological realm existing in an infinite elsewhere: there may only be matter and its vicissitudes, but matter has proven itself to be not-all because as soon as ideality emerges we see that it cannot posit itself as a single, self-enclosed totality able to secure its own inconsistency from within its own self-articulating field. In this sense, the emergence of ideality into existence occurs at a very precise moment – when matter encounters a logical interstice in its fold that creates the possibility of a new, unpredictable determinacy to be created 'out of nothing'. At this specific point, it is as if the vibration of the physical constitution making up specific empirical bodies in space-time *begins to relate to itself* as effect turns itself into cause: now vibration, instead of being the mere after-effect of the collision of quasi-entities as they collide into one of another within the mayhem of nature, is able to cause itself due to a cosmic glitch and thereby reinforce the structural constitution of a body. Vibration can be equated with ideality because, just as the entire body oscillates when it collides with another and thus produces sound, the ideality of the body is the latter's constant oscillation, indeed, is nothing but its very oscillation as that which creates and sustains its formative power. Consequently although there is no strict ontological difference between reality and ideality, nevertheless

we have to distinguish them – the difference between them is a parallax shift, so that the truth that binds them together is nothing other than the void, or the gap of the 'ontological' perspective separating them, which is the very moment at which vibration (physical constitution) relates to itself and thus creates a new category of determinacy in being by elevating itself above purely external relations.

Second, merely to extract the radicality of this dialectical movement, to say that this moment of the upsurge of ideality in being is a trembling is to bring to the fore the inherent precariousness of its emergence. There was no ontological guarantee that such a material inward reflection, the 'incarnation' of a relation of essence, would have occurred and there is no guarantee that the triumph miraculously won will be able sustain itself for all eternity. Even if there has been a victory – something has emerged from nothing – nevertheless trembling is at the very heart of such a victory and can never be overcome, conquered, done away with. There is a moment of radical contingency, antagonism, and struggle inherent to nature and the passage from one determinacy into another that will, rather than being softened as the dialectical spiral gains 'more and more' unity and power, repeat in different guises. The standpoint of absolute idealism and the trembling of matter thus go hand in hand: in order for a dynamic field of immanent self-mediation to posit itself, first matter, as that which radically opposes all self-relationality, must *tremble* in its very being as it comes up against its purely negative limit, beyond which nothing can be known or said until after the fact. There is consequently no radical difference between ideality as a highly complex form of being relating to itself (a vibration that is no longer externally evoked by extrinsic relations, but causes itself) and the trembling of matter: 'the ideality or subjectivity which trembling or vibration [*Erzitern*] is'[42], is nothing but the *the self-effacing being-outside-itself of nature*, which has here already begun to emerge from the auto-limitation of chaotic extimacy. Insofar as Hegel says we can see in *ordinary perception* the subjectivity of the concept (its dynamic, pulsating core as something more-than-material) in the very external actuality of living being (the matter that it bestows with life by animating it from the inside out by means of 'usurping' it),[43] here we can venture to conclude that in

42 Ibid., §300A, p.172 (Hegel, *PN*, p.138). Translation modified.
43 Hegel, W 6, p.485 (Hegel, GL, p.687).

the sound of bodies we hear *the first dull stirrings of the concept in its material genesis.*

iii) Chemistry

Physical bodies merely *impose* their ideal form on their parts through an eventful recollective-interiorising insertion of a self within matter and are constantly threatened by the excess of matter as an unruliness that fights against its ideal restructuration. If autopoietic self-referentiality has immediately emerged, it is in some sense 'fake'; it has by no means gained the power to post itself as such. Ideality is here still in close contact with the chaotic extimacy of nature as a freely existing Other, which makes the free positing of an inside-outside distinction as internal to the logical interiority of a complex system impossible. Within the chemical object, however, nature manages to liberate itself more by instituting a more or less autonomous field. Here interiority (the subjectivity of the concept) and externality (the objectivity of matter) coincide and constitute a one: 'The chemical process is, in fact, in general terms, *life*; for the individual body in its immediacy is equally *sublated* as *produced* [*ebenso aufgehoben als hervorgebracht*], so that the concept [*der Begriff*] no longer remains internal necessity, but comes into manifestation [*kommt zur Erscheinung*].'[44]

Within the chemical, the object in question is *completely* penetrated by ideal mediation (there is no excessive remainder), which forces us to conclude that self-referentiality is irreducibly constitutive of this domain of determinacy in matter. It is for this reason that Hegel says that the chemical process is *life*: the respective definitions share a structural homology, namely, that a chemical object is capable of preserving its self in a dynamic manner through the production of its own field of immanent relationality in the same way that living being is capable of preserving its self by actively relating to its environment, so that in both the two terms are internally related within the logical self or centre of the object or creature. But at this level self-referentiality is in itself extremely limited to the point that it too has failed in its victory, for it asserts itself as a self-referring unity *only in reaction against* other chemical objects, in the *refusal* to fuse with other objects. In other words, despite possessing a

44 Hegel, *W* 9, §335, p.333 (Hegel, *PN*, p.269). Translation modified.

highly articulated level of resistance to other objects demonstrating that the ideal whole within which its parts are a mere moment is fully developed, it is more or less incapable of free reproduction. In short, its self-referentiality is ultimately *inchoate*, but *unable* to posit itself for itself by itself. It remains *stilted*: there is a *leftover* of the being-outside-itself of materiality *within* the self-constitution of its ideality that must be sublated, a leftover that means that its freedom is paradoxically not free. Unable to liberate itself and fully constitute its own plane of self-determining determinacy, the immanent relationality constitutive of the chemical object *cannot completely fold back unto itself, return to itself*, in dealing with its Other: 'The *beginning* and *end* of the process are separate and distinct; this constitutes its finitude which keeps it far from Life and distinguishes it therefreom.'[45]

In the chemical process, matter trembles more and more as it feels something uncanny boiling within itself, remodulating itself from within, and enters a final stage of frenzy as its quivering falls out of control. Bodies do indeed refer to themselves – extimacy has given way to intimate interiority – but they do not exhibit a dynamic self-organising capacity for self-reproduction on the basis of its own resources. Here *living* objects are, paradoxically, *dead* objects: we see, as it were, the pulsation of a corpse. The trembling of the concept is still completely impotent insofar as the emerging field threatens to collapse upon itself at any moment and true autonomy still stands out of its reach *due to an internal real limit or obstacle*. Tasting freedom, but condemned to death, the concept suffocates under the weight of infertile being. It has to *get rid of it, eject it from itself*, in order to finally constitute itself as an autonomous zone of determinacy free from nature and completely take over its own ground. In this bizarre zone in-between the desert of the real and living vitality, we do not come across the land of the undead, but, rather, the terrifying indecidable simultaneity of death and life, their contradictory coincidence is something that is both and neither (a monstrous *coincidentia oppositorum*), that is necessarily prior to life's explosive and illuminative advent of being in its fullness. Do we have to presuppose such an ambiguous passage in our own ontogenesis in the forgotten dregs of nonconscious time before we emerge on the scene of life and play in its spectacle?

45 Hegel, *W* 9, §335, p.333 (Hegel, *PN*, p.269).

3. The self-referentiality of living being

Hitherto we have seen Hegel's *Realphilosophie* as an account of the eventful emergence of new determinacy within nature as an immanent overhauling of being's ordering principles, with each new determinacy overriding the precious in the positing of its own field. Slowly, we have seen the *material genesis of self-organising systems* – the concept as *dynamic autopoietic vitality* – out of/within the seething extimacy of nature. As should be clear, in contradistinction to the Romantic naturephilosophers, Hegel does not want to explain this genesis by means of an intrinsic productivity in nature: it is *tension* that pushes nature forward to its *possible* self-effacing in ever new forms; but these forms are neither implicitly pre-contained in previous ones nor do they have a preplanned linear trajectory. In this sense, Hegel is a philosopher of *radical contingency* for whom the emergence of life as an autonomous relational-dynamical field that stands on its own (is completely *selbständig*) is not a necessity, but only posits itself as such in the aftermath of its haphazard upsurge: nature, as simple impotence, does not at any step displays an inner logical articulation or structuration which would give it a freely developing, self-unfolding aim, only the concept being capable of such.[46] In this sense, there is *no* intrinsic teleology in Hegel's philosophy of nature – there is no possibility of an ontology of natural productivity and no divine understanding, an ontologised version of the spontaneous, synthetic activity of the transcendental subject,[47] which prepares the various levels of nature for spirit's emergence.[48]

When the autopoietic dynamicity of living being posits itself in nature, there is a radical ontological shift. The world is no more ensnared within *raw* externality, but has achieved a complete self-reproducing interiority able to assert itself in relation to an environment *posited as part of its own immanent self-determining field, that is, which is internal to it*. Within the latter, the matter of world is *completely* negated, integrated,

46 See Ibid., §249, p.31 (Hegel, *PN*, p.20) and for a reading of the passage see, Renaut *La naturalisation de la dialectique*, pp. 54-72.

47 We even see this divine understanding in the late Schelling: see for instance *Stuttgarter Privatvorlesungen*, in Friedrich Wilhelm Joseph Schelling's *Sämmtliche Werke*, ed. K.F.A. Schelling (Stuttgart: Cotta: 1856–61), VII, p.421.

48 This is clear from Hegel critiques of naturephilosophy and natural teleology. See, for instance, Hegel, *W* 8, §205Z, p.362 (Hegel, *LL*, p.282).

idealised, insofar as it becomes a part or moment of a self-articulating systematic whole; the outward reference of said system is simultaneously an inward reference and it is only in the relational-dynamic field constituted by this ensemble of logical interiority and external objectivity that living being can sustain itself in objective existence. The intimate interiority that has here arisen from the land of the dead is in stark opposition to the latter to the point that the determinacies active in both are *stricto senusu* incommensurable. The *Aufhebung* is an *immanent auto-determinaton of matter itself*, one which opens a space for a new (onto)logical possibility that rewrites the very fabric of the world; that is, the functioning of its determinacy – and here, through its own intrinsic tension, matter proves that it is no longer capable of displaying truth, that its being-outside-itself has become an *underdetermination* of a being to which it has given life in its vicissitudes. If at first there is only a material *Durcheinander,* Hegel's *Realphilosophie* is the attempt to explain the 'immanent process of 'auto-limitation or auto-normalisation of the omnipotence of chaos."[49]

Consequently, the life of the animal subject is (onto)logically alien to the purely extimate being of matter that it *immanently* animates through the process of its autopoiesis in/through it. There is a kind of immaterial intruder haunting the material body with its spectral presence, which is revealed in the animal's very capacity for self-movement. The latter is summed up in the *voice* of animals, which represents an intensification of the *trembling* or *vibration* of matter:

> The animal has freedom of *self-movement* because its subjectivity is [...] a free time which, as removed from real externality, *spontaneously determines its space*. Bound up with this is the animal's possession of a *voice*, for its *subjectivity* as *actual* [*wirklich*] ideality (soul), dominates the abstract ideality of time and space and displays its self-movement as a free trembling or vibration [*Erzittern*] *within itself.*[50]

This passage is distinctively *Lacanian*: if, as Žižek is so wont to point out, it is the ventriloquistic character of the *voice* that brings into light the ambiguity at the heart of the founding gesture of subjectivity, Hegel

49 Slavoj Žižek and Ben Woodard, 'Interview,' p. 413.
50 Hegel, *W* 9, §351, p.431 (Hegel, *PN*, p.353). Translation modified.

agrees, at least insofar as we limit ourselves to normal perception and the activity of the understanding as separation. If '[w]hen a body sounds, we feel that we are entering a higher sphere',[51] it is because there is a radical *disconnection* between the material externality of the body and conceptual interiority, its animating principle of unity, which is constitutive of the animal subject as such. Because the subject renders the matter it animates secondary, it appears as an alien presence. What strikes us as irreconcilable is that, while we see dead matter (pure externality) pulsating with life, we directly hear its soul (living interiority) in its free inward trembling or vibration, so that, although we see the concept in its subjectivity, we cannot comprehend how it is able to animate the very body it 'inhabits'.[52]

But this irreconcilability is *stricto sensu* not expressive of a duality, but, rather, *an (onto)logical parallax* of two distinct levels which stand in tight connection. Hegel's task is to develop a language within which the difference between matter and life has meaning but requires qualification as part of a greater unity that has emerged within nature. His task is to show that the free inward trembling of subjectivity that we catch glimpse of in the voice of animals is not the vibration of a purely spiritual realm lacking materiality (the effect of ontological dualism wherein spiritual activity occurs in a positively charged, self-determining physical void), but actually the paradoxical trembling of matter which has *turned in upon itself and begun to refer to itself* in such a way that a radical difference posits itself in being, cutting it in two, as it were, from within (a monism bursting at the seams wherein new logical registers can emerge from nothing), thus creating the sense of a ghost haunting the body in the spectral voice. This is why the category of vibration is so crucial – it allows us to see how Hegel is able to think how there can only be nothing but matter, but how matter is, in the same breath, not-all: the vibration of matter is logically non-coincident with the latter, and thus must be distinguished from it, even if it is nothing but an effect of matter; then, in a second movement, when vibration 'relates to itself', this minimal self-difference is radicalised, intensified, to the point that a break occurs, making the shift from the reality of raw matter to the new zone of ideality a parallax shift linked together by the cosmic glitch which is the very moment whereby vibration attains self-reflexivity, and

51 Ibid., §300, p.173 (Hegel, *PN*, p.138).
52 Ibid., §358, p.467 (Hegel, *PN*, p.383).

which thereby vanishes from sight in the erection of a new (onto)logical field. The trembling interiority of animal life stands for a direct indication of a field of immanent self-mediation having posited itself which is otherwise non-existent in the wide expanse of the cosmos – in short, it is indicate of this ontological parallax as such. Having become 'a *fulfilled* and essentially, as a self-referring *negative* unity, self-like and subjective'[53] ideality, nature exhibits in the animal realm three moments: (i) shape, (ii) assimilation, and (iii) the process of the genus.[54]

i) Shape

First, to say that an animal is *an actual* [*wirklich*] *subject* is to claim that the externality of its body (the real objectivity of matter as physical subsistence) is penetrated without remainder by the interiority of a dynamical system (the subjectivity of the concept as its logical pulsating core). There is *no difference* between the interior and the exterior within the organism: the 'Shape is the animal subject as a whole *only in self-reference* [*nur in Beziehung auf sich selbst*]. The subject displays in this whole the *concept* in its developed *determinations*,' namely, (i) universality (sensibility), (ii) particularity (irritability) and (iii) singular ([re]-production).[55] On one hand, these three moments of the concept's autopoietic dynamic are determinations that cannot be isolated abstractedly from one another. Each contains the totality *within itself*, so that each mediates the other. On the other hand, they are not to be understood as pure categories: they are not merely *realised* in a primordial manner in different biological systems (for Hegel, the nervous, circulatory and digestive systems) but, more radically, only emerge *in/through them*: the former stands in a reciprocal relation with the latter and from the beginning it is impossible to separate the (conceptual-ideal pulsating) subjectivity from the (material-real dead) externality of the organism; the palpitations of subjectivity immanently exist within the complex web of mediating relations, but in a paradoxical *material manner*. If ideality is the self-effacing gesture of materiality

53 Ibid., §337, p.337 (Hegel, *PN*, p.273). My translation.

54 Before we reach the animal organism in the reconstructive observation of nature, the dialectical movement passes through two other important moments, which fall outside of the scope of this essay: that of geological (Hegel, *W* 9, §338-342, pp.342-371 [Hegel, *PN*, pp227-293]) and vegetable nature (Hegel, *W* 9, §343-349, pp.371-429 [Hegel, *PN*, pp.293-351]).

55 Hegel, *W* 9, §353, pp.436-437 (Hegel, *PN*, p.357). My translation.

freely positing itself as self-referential, it is because, in living being, matter itself has attained a transcendent reflexivity which makes it more than matter in its very materiality.

The *sensibility* of the animalistic subject forms the zero-level of its underlying self-referentiality by constituting 'its simple, *universal being-within-self* in its externality.'[56] The animal organism is a self-sufficient logical totality. Biologically, sensibility reveals itself as: (a) the bone system, insofar as the organic needs an *inorganic* core, a centre *lacking sensibility* (displaying *Empfindungslosigkeit)*, in order to dynamically pulsate in matter; (b) the brain and nerves, which generate the very basis for its sense of self, but simultaneously display an outward relation, thus already hinting that the self of the organism is bound up with its other; and (c) the sympathetic nervous system as what establishes homeostasis. This universal being-within-itself – that is, the fact that the organism is a self precisely in virtue of the fact that there is a self-reference throughout its shape (each part refers to the totality and the totality, in turn, depends upon its parts) and constitutive of the latter as such, whereby the latter exists as a self-relating totality with an inner dynamism – is however no abstract universality: it only exists *in and through* the body and its biological system(s), that is, in an irreducibly *irritable* relation with their particularity as ideally posited by it. As a pure self, the animal subject is at once excitable by stimuli and capable of reacting to its exterior environment. Biologically, irritability divides itself into: (a) muscles, which convert this receptivity into outward reactivity; (b) blood, which, insofar as it transforms all consumed material into itself, presents the living *inward pulsating* which is simultaneously a 'pulsation towards this completely real side [*Pulsieren nach dieser ganzen realen Seite*];'[57] (c) the heart as the centre of this process of the organism's (re)production within itself as existing immanently in and as matter.

Consequently, the ideal shape of the organism emerges out of a reciprocal cooperation of its material parts. The universal being-within-itself of the organism (presup)poses its material particularity because the organism is *cause and effect* of its parts. Sensibility and irritability autonomously develop themselves, (re)produce themselves, within the

56 Ibid., §353, p.437 (Hegel, *PN*, p.357).

57 Ibid., §354Z, p.449 (Hegel, *PN*, p.368). My translation.

inwardly living formative process [*Gestaltungsprozess innerhalb seiner selbst*] of the organism which creates itself within matter. Here we see the dialectical movement at its finest: although life is thus nothing but a specific form of matter's self-organisation, this self-organisation cannot be understood, strictly speaking, in material terms, insofar as the organisation itself determines itself in an act of freedom, thus demonstrating the ontological irreducibility of life in its self-referential activity and its ontogenetic dependence on a ground. This ontological parallax is the unity-in-difference of matter and life, reality and ideality, nature and thinking. But this formative process automatically sublates itself insofar as the conceptual-material singularity of the organism and its capacity for ideal-real (re)production – connected with the digestive system – already relates itself to an *Other*: as autopoietic, it can only posit itself as a self-referential singularity by *assimilating the Other.*

ii) Assimilation

Here we see a crucial difference with regard to previous impoverished forms of self-referentiality: as singularised the self-referential dynamic of the animal not only forms a self-organising (set of) system(s), but also a concrete *self-feeling*. Through the formative process we see, for the first time, a self-referring subjectivity *conscious* of itself and its world. Self-feeling brings forth, however, a contradiction *within* the animal subject: 'Now since the organic [*das Organische*] is directed towards the outer world as well as being inwardly in a state of tension towards it, the contradiction of a relationship is posited [*gesetzt*] in which two terms standing on their own and mutually opposed to one another come on the scene [*zwei Selbstständige gegeneinander auftreten*].'[58] The founding gesture of an organism's self-referentiality creates, in the same breath, an operational distinction between the *Innenwelt* and the *Aussenwelt,* the first emergence within being of a split between the I and the not-I.

However, as constitutive of the very *self*-referentiality of the organism, this split is riddled with tension. Aware of this irreconcilable division within itself, this split devastates the unity of self-feeling in the organism insofar as the latter comes across – *within its very intimacy* – its own

58 Hegel, *W* 9, §357Z, p.464 (Hegel, *PN*, §356Z, p.381). Translation modified.

negation. Yet, this elementary tension grounds its practical activity in the world:

> The *real* process or *practical* relationship with non-organic nature begins with diremption within itself, with the feeling of externality as *negation* of the subject, which is at the same time positive self-reference [*positive Bieziehung auf sich selbst*] and the *certainty* thereof in face of this its negation: in other words, the feeling *of lack* and the *impulse* to sublate it [*dem Trieb, ihn aufzuheben*].[59]

> Only a living being [*ein Lebendiges*] feels *lack* [*Mangel*]; for in nature it alone is the *concept* [*Begriff*], the unity *of itself* and *its specific opposite*. Wherever there is a *limitation*, it is a negation *for a third*, for an external comparison. But it is *lack* [*Mangel*] only insofar as the lack's overcoming is equally present in the same thing, and contradiction is, as such, immanent and posited within it [*immanent und in ihm gesetzt*]. A being which is capable of possessing [*haben*] and *enduring* its own contradiction is a *subject*; this constitutes its *infinity* [*Unendlichkeit*].[60]

Animal life is therefore irreducibly *always already* in connection with its Other. Its zero-level is by no means harmony, but rather process, need, loss, resistance, *battle.*[61] There is no all-encompassing unity or peaceful perfection in nature, not even here:[62] lack is the ground of *all* activity insofar as animal life strives to sublate it. But this is *not* a spurious infinity, as if the subject tries to sublate its primordial lack only to fail in an endless repetition of the same. Instead of posing an internal limitation to the organism, this tense-ridden lack reveals itself as constitutive of the

59 Hegel, W 9, §359, p.468. Translation modified.

60 Ibid., §359A, p.469. Translation modified.

61 Life is essentially a process (Hegel, *W* 6, p.467 [Hegel, *GL*, p.674); Hegel, *W* 8, §217, p.374 [Hegel, *LL*, p.292]), 'in which it feeds upon itself' (Hegel, *W* 6, p.480). In living being the idea 'harbors the most extreme opposition within' (Hegel, *W* 6, p.468 [Hegel, *GL*, p.684) and a 'vital power of resistance' within itself with regard to its constitutive outside (Hegel, *W* 6, p.479 [Hegel, *GL*, p.683]). It is therefore a 'a constant struggle'. (Hegel, *W* 8, §219, p.376 [Hegel, *LL*, p.293]).

62 Unity is by no means 'rigid and unmoving.' (Hegel, *W* 8, §234, p.387 [Hegel, *LL*, p.322]) Hegel clearly insists that we must fight against an 'abstract, quietly persisting identity.' (Hegel, *W* 8, §215, p.372 [Hegel, *LL*, p.292]).

very living movement of the animal, since it is only by means of it that it is *thrown* into its world as a singularity that can stand on its own (which is *selbstständig*). Lack constitutes the underlying *impulse* of life, that which pushes it forward and bestows upon it an infinite, yet sometimes unsuccessful, productivity (singular lives, unable to fend for themselves, get eaten). It laces the structure of self-referentiality in such a way that in the *trembling voice* of animals we not only hear it, but also the animal's specific way of dealing with it – due to the creative power of its concept – comes into direct expression:

> Voice is a high prerogative [*Vorrecht*] of the animal which can appear wonderful; it is the utterance of sensation, of self-feeling. The animal makes manifest that it is inwardly for-itself, and this manifestation is its voice. But it is only the sentient creature that can show outwardly that it is sentient. Birds of the air and other creatures emit cries when they feel pain, need, hunger, repletion, pleasure, joyfulness.[63]

As self-referentiality grows more complicated, this lack, which stands in close connection to pain, instead of *losing hold* over the animal subject, becomes stronger: 'It is the prerogative [*Vorrecht*] of higher natures to feel pain; the higher the nature, the more unhappiness it feels.'[64] Animal life is, in other words, essentially exposed to risk, trauma, antagonism, death, disease – and it is only by being in permanent communication with the latter that it sustains its freedom. All living being must pass through the trial of pain, a trial that is simultaneously a curse and a gift: because the self-referentiality of living being implies a split between conceptual interiority and objective exteriority, it is in itself dirempt, experiences need and self-loss, which in turn simultaneously bestows upon it an energetic, vital impulse and constitutive pain.[65]

This lack grounds the theoretical and the practical processes. Whereas the theoretical is constituted by the five senses and 'passively' assimilates the world by perception, the practical is an 'active' assimilation insofar as the subject either (i) *consumes* the external world or (ii) *integrates* it into itself by *'excentering* [exzenieren]*' itself within it,*

63 Hegel, *W* 9, §351Z, p.433 (Hegel, *PN*, p.354). Translation modified.
64 Ibid., 359Z, p.472 (Hegel, *PN*, p.387). Translation modified.
65 Hegel, *W* 6, pp.480-482 (Hegel, *GL*, pp.684-685).

putting itself in the world. We see the latter in various formative drives: Hegel's favourite examples are those of the building of nests, burrows, and weapons like fangs or webs. Not only do these forms expand the environment of the animal, but they form a 'self-externalisation', 'a building of the form of the organism into the outside world.'[66] The various ways in which an animal deals with its environment are therefore only rendered possible by its original lack-ridden self-referentiality made dirempt by a constitutive antagonism, which Hegel explains with recourse to a Fichtean language: 'The organism must therefore posit what is external as subjective, appropriate it, and identify it with itself; and this is *assimilation*.'[67] If the outward relation is part of the animal's self-organising system,[68] and this relation exposes the animal to risk, the immediate consequence of this is that a scientific language must not only be capable of thinking the genesis of the organism's autopoiesis, but also the 'absolute contradiction', the lack which living being as such is: 'It is said that contradiction cannot be thought; but in the pain of the living being it is even an actual, concrete existence.'[69] We need a language of pain, trauma, and risk – this is one of the fundamental tasks of the latter parts of the *Philosophy of Nature*.

If the founding gesture of animal subjectivity is simultaneously with the first establishment of an *Innenwelt* and *Aussenwelt*, an I and not-I, at the same time this very gesture boils down to a certain *disintegration* of the very inner-outer distinction it posits as part of its free movement and illustrates various similarities which exist between Hegel's conception of living being and contemporary philosophical interpretations of autopoiesis. Organisms do not calibrate themselves to their world as some kind of independently existing outside with which they come into contingent relations, as in various kinds of representational or computational models based on stimulus-response systems. In other words, there is no pure outside which causally affects the organism *soliciting* a response. Consequently, it would appear that several fundamental characteristics that we can identify in the phenomenon of autopoiesis share a structural homology with those we see in Hegel's theory of the self-referentialtiy intrinsic to living being. As a certain

66 Hegel, *W* 9, §365Z, p.494 (Hegel, *PN*, p.406).
67 Ibid., §357Z1, p.464 (Hegel, *PN*, p.381).
68 Ibid., §363Z, p.484 (Hegel, *PN*, p.398).
69 Hegel, *W* 6, p.481 (Hegel, *GL*, p.684).

theory of autopoiesis – one developed by Rainer Paslack in his archaeology of the concept of self-organisation – makes clear, one of the major groundbreaking claims of autopoiesis as developed by biologists such as Maturana and Varela is the thesis 'that the inner-outer differentiation (the organism in its medium) is a description dependent upon the observer.'[70] The organism *freely* posits its own environment as the immanent field within which it moves – within the organism, the outside is always already a self-reference – so to understand how an organism relates to its own environment we must focus on its very autonomy. This is also what Hegel does when he tries to understand the relationship between the animal's shape and theoretico-practical relationship to the world by means of the organism's underlying lack. (ii) An immediate consequence of this is that even the digestion of food must be seen as 'a freely – self-organised – achievement of the (species-specific) protein synthesis apparatuses peculiar to a respective organism.'[71] Hegel shared the same intuition, though he came to it in a different way: 'In this immediate relation of the organic to the non-organic, the former is, as it were, the direct melting of the non-organic into organic fluidity,'[72] so that here 'all chemical and mechanical explanations founder and … find their limit.'[73] (iii) But, as Paslack underscores, if this is the case, then 'the relationship between cognition and life (organisms with or without nervous systems) is consequently determined in a radically new manner: the process of the cognition and the process of life prove themselves to be in the last place identical.'[74] But didn't Hegel argue the same point *almost two hundred years prior*? After all, in the *Logic* life becomes *cognition* and then *will*, before the three come together in the absolute idea. The immediacy of life's self-referentiality is, for Hegel, always already cognition of self and its environment, which bestows upon it its self-movement a necessarily practical engagement.

70 Paslack, Rainer. *Urgeschichte der Selbstorganisation. Zur Archäologie eines wissenschaftlichen Pardigmas* (Wiesbaden, Vieweg: 1991), p.158.
71 Ibid., p.138.
72 Hegel, *W* 9, §365Z, p.483 (Hegel, *PN*, p.397).
73 Ibid., §365Z, p.484 (Hegel, *PN*, p.398).
74 Paslack, *Urgeschichte der Selbstorganisation*, p.152.

iii) The process of the genus

Hegel's analyses of assimilation in the philosophy of nature are more radical than they might appear. Not only must subjects *eat*, but the zero-level of subjectivity's self-posing interiority *is* the digestive assimilation of the outer world. If Levinas says that Heidegger's Dasein is never hungry, we must in contrast say that Hegel's subject exists *only in virtue of its originary hunger*: the emergence of ideality in material being goes hand in hand with hunger, whose first expression is the devouring of the world. Yet the subject does not just encounter the world as some kind of pure thereness forcing itself upon the subject (spoon feeding it, as it were). It can only eat insofar as it freely idealises its environment, thereby instituting a complete penetration of the subjectivity of the concept and the objectivity of the world within its immanent self-mediation. In a Fichtean manner, the animal subject posits the world in order to concretely realise itself, sublate its lack, but in opposition to Fichte, the Hegelian subject only exists in and through a complex (set) of biological-material system(s). The transcendental subject, already visible in animals, is *necessarily corporeal*: the corporeality of the animal, strongly connected with its *lack*, *grounds* the primordial basis of its infinite freedom, so that transcendentality is completely naturalised. Hegel turns Fichte's transcendentalism on its head.[75]

Although it has fully come on the scene, subjectivity is still impoverished insofar as it is not yet capable of distinguishing itself as a full-fledged creative self.[76] Because the animal only constitutes its singular specificity through eating, the animal organism cannot see itself in the world it has posited for itself: the primordially active constitution of its own field of immanent self-mediation has been paradoxically swallowed up by itself and is unable to completely free itself from its entanglement within its physical surroundings. If there is to be greater self-liberation from nature, the organism must learn how to repel itself (its necessary entanglement with the world via constitutive hunger) from itself (its true ideal self as active constitution), thereby doubling itself. Ensnared within the external constraints of matter, the animal subject has to *eject it from itself from ideality*, as it were, and thereby render it secondary to other forms of

75 When Iain Grant criticises Hegel by claiming that – in contrast to Schelling – Hegel remains too Fichtean with respect to his overall methodology, he therefore misses this very important point. Cf. *Philosophies of Nature after Schelling*, p.118.
76 Hegel, *W* 9, §365Z, p.491 (Hegel, *PN*, p.401).

activity, if it is to finally constitute itself as an autonomous zone of determinacy.

This tension within the ontological grounding of the subject expresses itself in three fundamental moments: (i) the abstract repelling of itself; (ii) the formative drive; and (iii) begetting within the species. The lowest level of the ideal-practical relationship in living being is the digestive system and the simplest animals only have an intestine, their activity only resulting in excrement. But it is not enough to merely digest the world – if the animal subject does so, it is unable to mould the world after its own image, that is, *its freedom*, insofar as it only brings forth a formless mass lacking actuality. However, Hegel believes we already catch glimpse of a way out within the act of shitting: 'Excrement has, therefore, no other significance than this, that the organism recognising its error, gets rid of its entanglement with outside things.'[77] If the animal's ideal freedom only results in a digestion of the world, not only does the animal thereby effectively lay waste to its freedom, but the latter becomes completely subdued to the animal's theoretico-practical relationship to the physical world it posits in its materiality. In this sense, the first-level of self-externalisation of the animal is completely impotent and is therefore *abstract* because it lacks the concreteness of something that would be able to have or produce an effect [*wirken*] in world, itself lacking any actuality [*Wirklichkeit*].[78] The animal, being an actual [*wirklich*] subject, is constituted by such a relation in its essence, but its products in its own world are not – there is a disconnection between the two, so that the animal is in an extreme state of self-contradiction. Moreover, if the originary hunger at the heart of subjectivity necessarily leads to this self-externalisation, it cannot be overcome or left behind without giving up on subjectivity itself, leading to an impasse. In a radical move that anticipates psychoanalysis, Hegel claims that given the achievement of a higher level of animality, the animal must develop a means according to which, at the level of ideality, it *recoils from* the product of its 'innermost *natural* being'. In other words, it needs a special dialectical relationship to its excrement: it must learn to be unable to recognise itself in it and thereby be unsatisfied with eating as a sublation of lack, if this tension is

77 Hegel, *W* 9, §365Z, p.492 (Hegel, *PN*, p.405).

78 When I use the words 'actual' and 'actuality,' the reader should have in mind Hegel's logic of Wirklichkeit in the Logic.

to be truly surpassed, just as humans must undergo toilet training as a necessary moment of the passage into culture.

Interestingly, Hegel goes even further, in a move that places a great deal of philosophical importance on the moment of shitting in the dialectics of nature. The other forms of 'self-externalisation' actually base themselves on this first naturalistic form, thus bringing them dangerously close to one another – not only the formative drive,[79] but also begetting:

> These three seemingly heterogeneous processes are essentially connected with one another in nature. In many animals the organs of excretion and the genitals, the highest and lowest parts in the animal organisation, are intimately connected: just as speech and kissing, on the one hand, and eating, drinking and spitting, on the other, are all done with the mouth.[80]

Not only is this ideal, second-level recoiling from the artefacts produced by the first-level 'abstract repelling of self' (disgust at shit, salvia, urine, etc.) a necessary moment of higher level externalisations, but we thereby see that excrement, formative structures, and begetting are structurally identical: they are merely different responses to the underlying lack of subjectivity, just as ethics and politics will be in the philosophy of spirit. *Both* shitting and high culture are revelatory of the struggle of subjectivity to completely free itself from the wild extimacy of nature. For Hegel, *everything* is an object of theory – and must be theorised.

Once this recoil can occur at the level of the ideality, a recoil from its very first-level self-externalisation, the animal subject can enter into more engaged forms of formative structures and begetting, forms whereby the latter become more important to the organism's self. The former, however, do not solve the tension that has been posited: nests and fangs are mere expansions of subjectivity's theoretico-practical relationship with the environment, and in themselves dead; they are incapable of bringing forth actual relationships in the world. But as soon as the organism brings forth another individual and *recognises itself in it*, it assimilates the world in such a way that it completely externalises itself

79 Hegel, *W 9*, §365Z, p.494 (Hegel, *PN*, p.406).

80 Ibid., §365Z, p.492 (Hegel, *PN*, p.404).

within it, realises its ideal freedom by expanding it, and then becomes '*genus in-itself*, or substantial universality.'[81] The organism can only support the underlying lack of its being by creating another singularity like itself: the self-referentiality of higher organisms goes beyond self-feeling's solipsistic singularity and escapes the facticity of its biologico-material systems. At this juncture, however, the organism is in insurmountable contradiction with itself: on one hand, it is a functionally closed ideal system, but on the other its apparently freely self-positing singularity is *lost* in the genus.

The individual is split between its irreducible singularity as a self-referential existent and its universality as belonging to a genus. The ontological lack underlying this or that subjectivity is here inseparable from the immanent plane of interaction constituted by *all such* subjectivities, such that the impulse of the former is tied up with the undulations of the latter, to different degrees in different animals. But the 'weakness' of the individual when confronted with the universality of the genus is by no means a mere internal real limit of the individual. This contradiction between singularity and universality can form an irreducibly constitutive field of immanent *intersubjective* mediation between animals. In the shift from the abstract universality of the singularised organism to the substantial universality of the genus *the feeling of universality* emerges, so that there is something like ethical experience in animals. Not only does Hegel say that '[t]his feeling of universality is the highest to which the animal can attain,' but also that animals 'have their self-feeling only in the other,'[82] which is at its most developed form in mammals.[83] Here, self-referentiality is always already, even if only inchoately, a relation to an Other just as, in human existence, spirit is 'an 'I' that is a 'We' and a 'We' that is an 'I'.'[84] Higher animals show us the first traces of *spirit* as completely liberated from matter: with them, the free genesis of conceptual self-referentiality starts occurring at a level that is extremely distant from that of matter and its vicissitudes. In this sense, Hegel presents a complex theory of the simultaneous

81 Hegel, *W* 8, §220, p.376 (Hegel, *LL*, p.293).
82 Hegel, *W* 9, §369Z, p.517 (Hegel, *PN*, §368Z, p.412).
83 Ibid., §368Z, p.514 (Hegel, *PN*, §370Z, p.426).
84 Hegel, *W* 3, p.145; Hegel, G.W.F. *The Phenomenology of Spirit*, trans. A. V. Miller (Oxford, Oxford University Press: 1977), §177. Hereafter *PS*.

continuity and discontinuity between animality and humanity, nature and spirit.

Conclusion: Realism and Idealism in Hegel's *Realphilosophie*

Hegel's great achievement in the *Realphilosophie* is that each empirical-material domain has its own irreducible field of determinacy, and therefore each can apply its own categories there without reservation, although there exists an interactive field of immanent (self-effacing) mediations between each level, one giving way to the ontological superiority of the other. By presenting the various logical levels of determinacy active within the domains covered by natural science, Hegel gives us the resources we need to explain the *material genesis* of one empirical level out of the previous and the dynamic relationships between each as continually increasing complexity arises. Even if the natural science upon which Hegel relies is outdated, his approach to the sciences and the theoretical tools that he has developed nevertheless could be of great use to us today in rethinking the concept of life and the specific relationship between science and philosophy. After all, to claim that the latter has been debunked given the emergence of early nineteenth-century science would be to confound two levels of investigation.

One of the major tasks of this article has been to show that the opposition between the being-outside-itself of nature – the dead husk of matter – and the self-determining interiority of freedom – the radical self-positing autonomy of spirit – is no mere dualism for Hegel. If we superimpose the real-ideal dichotomy with that of the body-spirit active within modern philosophy from Descartes onwards, then we witness a nuance in Hegel: the 'split' between spirit and body occurs *within* the material real of nature in virtue of an emergent and immanent activity of the latter's own tendency towards self-transcendence. The standard debate between idealism and materialism is turned on its head. A true idealism only wants to show how the real *mediates itself, stands in movement*; how it sublates itself, raises itself above its own extimate immediacy, by its own force; idealism is only the *name*, an empty place-holder, for this activity of matter's self-effacement. This is why, for Hegel, all true philosophy is an idealism and there is no ultimate opposition between idealist and

realist philosophies: because one cannot rest at the level of the immediacy or givenness of the real if one wants to embark upon true philosophical science; one is forced to delve into its 'essence' or 'because', which, instead of being some kind of dynamicity *external* – that is, above or beyond – the real, shows itself to be nothing other than its very auto-mediation, how it relates to itself in its very (auto/self)-development.

This status of the real and the ideal in Hegel's approach is most clearly seen in emergence of living being in the *Realphilosophie* where he shows how the raw finitude of mere matter is contingently pushed, by inner contradiction/tension, towards higher and higher *unpredictable* levels of organisation. Because, for Hegel, matter is constituted by a pure being-outside-itself, these emergent levels of the immanent remodulation of nature's ontological ordering principles *cannot* be identified with matter as such or the raw productivity of a powers ontology. As the 'truth' of nature, ideality gives birth to its own intimate interior space by paradoxically setting the stage for its own immaculate conception before it existed. As already mentioned in the case of bodies which achieve a level of calm subsistence due to gravity, just like Baron Münchhausen pulls himself out of the swamp by his own hair, ideality is able, in a process of uneasy self-begetting, to arise out of nothing by means of its own self-caused freedom. However, one must underline the intrinsically paradoxical structure of this process. The latter is *stricto sensu* characterised by an underlying retroactivity, for with life the radically new emerges in being and by its emerging rewrites the very past from which it 'originates' by inscribing a new virtual potentiality within it which it realises, but a potentiality that *cannot be said to exist prior to its self-positing which simultaneously posits possibility within the past*.

Positing one's presuppositions demonstrates that very necessity of dialectical movement is, in its founding gesture, contingent, but this movement is by no means constituted by a series of smooth transitions. This *Er-inner-ung* of nature's extimacy takes on diverse forms in which living self-referentiality slowly arises, but all have a similar logical form: that which emerges proves itself to be ontologically superior to its dark ground or pre-history. Logical dependence (the autopoietic dynamic depends upon the matter from which it emerges) does not

unconditionally lead to a pure identity, an eliminative materialism, nor does it exclude the possibility of a real difference in being: we can think the ontological *priority* of that which, ontogenetically speaking, is only of a *second order.* Hegel argues that only a *naturalised idealism/idealised naturalism* is capable of showing the ontological irreducibility of living being while articulating the latter's ontogenetic dependence upon different empirical-material and inorganic domains without succumbing to a naïve vitalism.

A reactualisation of Hegel's concept of life could not only help us reconceptualise life in the natural sciences, but also how we view Hegel. Indeed, not only does Hegel – in opposition to Kant, Fichte and recently McDowell[85] – explicitly say that animals exist as free *subjectivities* and *real being-for-themselves*[86] but also, and more radically, that '[t]he life of the animal as this highest point of nature' – which is 'the immanent infinitude of form which is set forth in the externality of the body' via *absolute* self-referentiality – 'is thus absolute idealism.'[87] The first proof of absolute idealism, therefore, *is not* transcendental consciousness or absolute knowledge, but rather the *animal as such*, in such a way that we should claim – to salvage a good old *Hegelian* word – that Hegel's absolute idealism is actually nothing more than a *speculative* realism. Deriving from the Latin *speculat* (to observe from a vantage point) and *speculari* (to watch over), Hegel's realism is one which watches the immanent movement of the real transform into a complex field of living being as ideal self-mediation, so that both idealism and realism are turned on their heads:[88] 'this idealism which recognises the idea

85 See, for example, McDowell, J. *Mind and World* (Cambridge, Havard University Press: 1996), pp. 108-126. Animals are only 'proto-subjectivities'. (Ibid., p.117)

86 See, for instance, Hegel, *W* 9, §365Z, p.491 (Hegel, *PN*, p.404).

87 Ibid., §350Z, p.430 (Hegel, *PN*, p.351-352).

88 In this sense, one could also call Hegel's philosophy of nature a form of transcendental materialism, insofar as Fichte uses this expression in his 1794 *Some Lectures Concerning the Scholar's Vocation* in order to draw attention to the impossibility of explaining the (onto)genesis of the absolute I: 'It is certainly not true that the pure I is a product of the not-I [...]. The assertion that the pure I is a product of the not-I expresses a transcendental materialism which is completely contrary to reason.' (Fichte, *Fichte. Early Philosophic Writings*, trans. Daniel Breazeale (Ithaca, Cornell University Press: 1988), 147). For Hegel, not only is the I as absolute subject not limited to the human, but is more widely identified with living being, especially in its animal incarnation, and even has precursors in

throughout the whole of nature is at the same time realism, for the concept of the organism is the idea as reality[...]. What philosophy recognises in the real, the sensuous world, is simply the concept.'[89] Hegel's concept, therefore, is nothing outside of or before the world, but *a contingently emergent pulsating core within/of matter itself.*[90] The shift from substance to subject is therefore completely dependent upon the material genesis of self-referentiality within living being, which contingently posits itself within the raw flux of matter owing to tension as the ultimate building block of reality.

chemical and mechanical nature.

89 Hegel, *W* 9, §353Z, p.438 (Hegel, *PN*, p.358). See also Hegel, *W 8*, §24Z2, p.85 (Hegel, *LL*, p.59).

90 Hegel, *W* 9, §350Z, p.431 (Hegel, *PN*, p.352).

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The Knowledge of Life in Canguilhem's Critical Naturalism

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Introduction

In twentieth century 'Continental' philosophy, one can find at least two attempts to rethink the relation between thought and life and the implications this has for epistemology and ontology. In one attempt, which can be seen in the vitalist tradition from Henri Bergson to Gilles Deleuze, it is claimed that epistemology and ontology are inseparable. In order to rethink the nature of life, a new form of thinking is required such that thought can enter into the movement of life itself. In another attempt, which can be found in the epistemological tradition of Gaston Bachelard, Georges Canguilhem and Michel Foucault, it is claimed that the supposed inseparability of these two areas only points to an inability to properly conceptualise them. This view accepts that concepts must be determined in relation to what is known about life or nature, but argues that this determination implies a rupture between knowledge and its object. Thought is a product of life, but the knowledge one has of life turns life into an object to be questioned.[1] As a consequence, the

1 The thrust of this distinction comes from one of Canguilhem's most renowned students, Michel Foucault, in the introduction to the English translation of Canguilhem's central text, Canguilhem, G. *The Normal and the Pathological*, trans. by Carolyn R. Fawcett and Robert S. Cohen (New York: Zone Books, 1989), pp.7-24. There Foucault polemically distinguishes between a philosophy of experience or the subject and a philosophy of the concept so as to separate the

epistemological access to life is not to be conflated with what life itself is.

In this essay I will sketch the outlines of Georges Canguilhem's much overlooked position regarding the relation between thought and life. I will argue that his position could be best characterised as that of 'critical naturalism'. It is naturalist in claiming that thought is a natural product of life, albeit one that brings with it the possibility of a new norm, i.e., truth. The critical side has two implications. Ontologically, it claims that nature is capable of 'critiquing' itself, i.e., nature is a dynamic process of producing a variety of individuals, not essences. Nature does not conform to external, static ideals but creates its own norms that are dynamic and capable of changing. Epistemologically, it claims that thought is a process of objectification and critique that begins from the object to be known (here, the concrete living being in its milieu), as determined under historically varying conditions. Conceptualising life in terms of variation shapes how certain problems pertaining to life are to be understood and requires that it is the dynamic reality of the living object that determines how such concepts will be used.[2] While the naturalist claim of continuity between thought and life would seem to link Canguilhem to the vitalist tradition that grafts epistemology onto ontology, it will be argued that it is within the epistemological requirements of his 'knowledge of life' that Canguilhem diverges from

epistemological tradition of Koyré, Bachelard, and Canguilhem from that of phenomenology. While at first sight it is difficult to place the vitalist tradition of Bergson and Deleuze within this framework, it certainly seems better suited to the philosophy of experience insofar as it tries to think those experiential or sensible conditions (such as duration or the intensive forces of life) out of which one can understand nature or life. It does not begin with concepts, but tries to rethink conceptuality by means of particular experiences. As such, this distinction remains poignant and I will attempt to make Canguilhem's suppositions more explicit so as to better understand the philosophical implications of such a distinction.

2 As such, this position shares much in common with what Ray Brassier describes as 'transcendental realism' or what Ian Hacking describes as 'dynamic nominalism'. For both it seems essential that concepts remain separate from their designated objects but that these (historically contingent) concepts or classifications interact dynamically with the reality of the object to be conceptualised or classified. See Brassier, R. 'Concepts and Objects', in *The Speculative Turn: Continental Materialism and Realism*, ed. by Levi Bryant, Nick Srnicek and Graham Harman (Melbourne, Re Press: 2011); Hacking, I. *Historical Ontology* (Cambridge, Harvard University Press: 2000).

this tradition. This essay, then, will mainly focus on the dual implications of Canguilhem's insights regarding the knowledge of life, and in doing so it will reveal the extent to which Canguilhem's critical naturalism problematises the relation between epistemology and ontology.

1. Life and the Living as Originary

One aspect of the relationship between thought and life explored by Canguilhem can be traced back to the work of Bergson, for whom the very task of philosophy is to develop concepts that are precisely formulated to grasp life's creativity, which in Bergson culminates in the *élan vital*. In this line of thinking, as life itself is a series of creative solutions to problems or obstacles that are posed to living beings, philosophy best attests to life by being that practice of precisely analysing problems so as to produce more productive ones.[3]

In Canguilhem's phrase 'the knowledge of life' (*la connaissance de la vie*), the genitive produces a dual meaning (which I will label M1 and M2), the first meaning of which builds on this idea of life's productivity or creativity, but, as we will see, takes us in a different direction.[4] In this first meaning (M1), the knowledge of life entails viewing life as originary, with life being understood as the activities and possibilities of concrete living individuals, some of which are capable of thought. When the activities of humans are being considered, from interacting with their milieu to conceptualisation, there is continuity between life and thought, the latter being a natural, albeit unpredictable, product of the former. In

3 Bergson, H. *Creative Evolution*, trans. by Arthur Mitchell (Mineola: Dover Publications: 1998) pp.18-72. See also Thomas Osborne's essay on the nature of problems in Bergson and Canguilhem, Osborne, T. 'What is a Problem?', in *History of the Human Sciences*, 16.4: pp.1-17 (2003). I will return to this essay in the final section.

4 This phrase comes from the book whose title bears the same name, first published in 1965, Canguilhem, G. *Knowledge of Life*, trans. by Stefanos Geroulanos and Daniela Ginsberg (New York, Fordham University Press: 2008). This dual meaning has also been pointed out (though without detailed analysis) by Pierre Macherey and Frédéric Worms, see Macherey, P. *In a Materialist Way*, trans. by Ted Stolze (London, Verso: 1998) and Worms, Frédéric (2008). 'Le concept du vivant comme philosophie première: de Canguilhem à aujourd'hui', in *Philosophie et Médecine: En hommage à Georges Canguilhem*, dir. by Anne Fagot-Largeault, Claude Debru and Michel Morange, ed. by Hee-Jin Han (Paris : Vrin).

this view of life, the relation between the living being and its environment and how this relation is expressed in terms of the creation of norms and activities are taken to be primary.

In the essay 'The Living and its Milieu' in *Knowledge of Life*, Canguilhem describes this view of life as follows: 'To live is to radiate; it is to organize the milieu from and around a centre of reference'.[5] This notion of a centre should not be understood as the fixed centre of a circle that never moves in relation to the changes in the circle's circumference, but rather in terms of a centre of a plane that is constantly displaced in relation to changes in the plane's area. In other words, the living is a centre that is displaced as it interacts with and is influenced by its milieu. In another essay from that text, Canguilhem describes life as 'an order of properties', or 'an organization of forces and a hierarchy of functions whose stability is necessarily precarious, for it is the solution to a problem of equilibrium, compensation, and compromise between different and competing forces'.[6] Life is an order of properties in the sense that there are various ways of living and of finding solutions to the problems arising when forces compete, some of these solutions being capable of a wide range of activities, others a more narrow range. Between organisms the differences in capabilities are based on the interactions between physiology and environment (the cheetah's running capacities or the bacteria's ability to live in extreme conditions), and within each organism this same interaction determines the range of abilities throughout the course of the individual's life cycle (the changing capacities from infancy to adulthood).

In this view of life, admittedly an evolutionary view, individual differences matter and make all the difference for the possible actions of a given individual. Irregularities and anomalies are not 'failed forms' or irrationalities but are a normal aspect of life's variety. In short, there are no failed forms, even if some are more successful than others. As life is a hierarchy of competing forces and functions, the individual is not an aberration, failure or disruption of the laws of nature, but simply reveals the plurality and dynamicity of nature's norms. Life entails 'improvisation, the utilization of occurrences; it is an attempt in all

5 Canguilhem, *Knowledge of Life,* p.114.
6 Canguilhem, *Knowledge of Life,* p.25.

directions'.[7] Knowledge of life in this sense, then, views life in the 'subjective' sense of the production or creation of varying norms.

In his main work, *The Normal and the Pathological,*[8] Canguilhem describes this view of life in terms of a 'normative activity'[9] or 'polarity'.[10] In other words, life is normative, not because it follows norms or laws, but insofar as it is capable of establishing norms that are qualitatively different (for example, healthy norms and pathological norms). This view of life implies a rejection of making a value judgement of organisms since it is not science or philosophy that can take the legislative role and determine which norms have value: it is life itself 'which makes the biological normal a concept of value and not a concept of statistical reality'.[11] More bluntly: 'One does not scientifically dictate norms to life.'[12] The value of a biological norm, whether it is lived as positively or negatively—hindering or aiding activity—is not determined by any relation to an external norm or ideal, but is determined from within the living organism's mode of life. The validity of the organisation of living beings 'must be referred to the eventual success of their life. It is because value is in the living being that no value judgement is made on it'.[13] It is thus the individual living being that determines the value of its norms. As Alain Badiou points out, this entails that the relation between knowledge and life (M1) does not depend upon the operations of a transcendental subject, but on the fact that one is alive.[14] It is thus neither

7 Canguilhem, *Knowledge of Life,* p.90
8 Canguilhem, *The Normal and the Pathological.*
9 Ibid. p.126.
10 Ibid. p.128.
11 Ibid. p.131.
12 Ibid. p.226.
13 Canguilhem, *Knowledge of Life,* p.125.
14 See Badiou, A. (1998) 'Is There a Theory of the Subject in Georges Canguilhem?', trans. by Graham Burchell, *Economy and Society,* 27.2-3: pp.225-233. Badiou's claim rests on Canguilhem's own words in *Études d'histoire et de philosophie des sciences* (Paris, Vrin : 1986) p.352, where he develops some new reflections on the knowledge of life: 'Car il y a dans la connaissance de la vie un centre de référence non décisoire, un centre de référence que l'on pourrait dire absolu. Le vivant est précisément un centre de référence. Ce n'est pas parce que je suis pensant, ce n'est pas parce que je suis sujet, au sens transcendantal [sic] du terme, c'est parce que je suis vivant que je dois chercher dans la vie la référence de la vie'.

thought itself nor the knowing subject, but the living being as an irreducible centre of reference that provides the occasion for knowledge.

An example of how this view is put to work can be seen in Canguilhem's rethinking of the relation between machines and organisms. As opposed to the still upheld Cartesian view that the organism can be described as (and even equated to) a machine[15], he suggest that we take seriously the history of thought and life in human activity, and the continuity between life and activity as seen in the use of tools or machines to work upon and alter one's surroundings. Canguilhem, borrowing the idea from the work of André Leroi-Gourhan and Georges Friedman, argues that the invention and usage of machines or tools is not merely the application of knowledge, since the activity of working on or shaping one's milieu precedes such knowledge.[16] Human techniques arise out of biological needs and function as the extension of biological organs, implying that vital activity precedes knowledge. This idea is expressed in *The Normal and the Pathological* as follows: 'All human technique, including that of life, is set within life, that is, within an activity of information and assimilation of material.'[17] From amoebas enveloping food and excreting, to racoons washing their food, to the technological advancements of human medicine, it is always from within life itself as a series of dynamic relations among living individuals within a given environment that such activities are to be understood: 'human technique extends vital impulses.'[18]

It is this position that allows Canguilhem to critique the view that organisms are simply machines, precisely because this view overlooks how the historical relation between the creation of machines and the application of this model to organisms. In other words, the human cannot properly be said to be an *homme-machine* precisely because the human is that which gave birth to the machine as an extension of its vital needs

15 For more on the contemporary relevance of mechanistic views in biology Nicholson, D.J. (2011) 'The Concept of Mechanism in Biology', *Studies in History and Philosophy of Biological and Biomedical Sciences*. In Press: 10.1016/j.shpsc.2011.05.014..

16 Canguilhem, *Knowledge of Life,* p.94-96.

17 Canguilhem, *The Normal and the Pathological,* p.130.

18 Ibid. p.130.

and activities: 'biological organization must necessarily precede the existence and meaning of mechanical constructions.'[19] This suggests that it is anachronistic and anthropocentric to describe organisms mechanically, and that human activity undermines such a label: 'Even when subordinated to machines, man cannot apprehend himself as a machine. His productive efficiency improves the better aware he is of his centrality with regard to mechanisms intended to serve him.'[20] In calling the organism a machine we overlook this historically determined relation and thereby confuse the object of study with its historically contingent description.

This first meaning, then, can be described in terms of critical naturalism, since it suggests the methodological requirement of naturalism that knowledge of life be set within the activities of life, implying that the activities of life determine the value of its norms and thus serve as the basis of our knowledge of them. The knowledge of life is based on the observation that living individuals have a non-indifferent relation to their environment. Individuals are 'centres of resistance' whose activity carves out a place for them within their milieu.[21] The valuation of such activities will then only be determined from within that individual's mode of life and not by means of its relation to transcendent ideals or transcendental categories. As knowledge entails the use of concepts, the meaning of such concepts is not an arbitrary human construction, but is dynamically determined in relation to the activities of living beings. Canguilhem's critical naturalism, then, implies that the basis of knowledge is removed from the transcendental subject and placed within life itself. If life is conceived as the dynamic acquisition and transmission of information, then the products of this activity, including human thought, are to be understood as natural products of life.

19 Canguilhem, *Knowledge of Life,* p.91. See also Canguilhem, G. 'The Role of Analogies and Models in Biological Discovery', in *Scientific Change: Historical Studies in the Intellectual, Social and Technical Conditions for Scientific Discovery and Technical Invention, From Antiquity to the Present*, ed. by A.C. Crombie (London, Heinemann Educational Books: 1963) where he makes a very similar argument.

20 Canguilhem, *Knowledge of Life,* p.110.

21 Ibid., p.110 and p.118.

2. Life as an Object

While this continuity between biological activity or vital techniques and life is thought as primary, there is a sense in which the knowledge of life entails a rupture or discontinuity. In the second meaning of the knowledge of life (M2), life is taken as an object of thought. While M1 tried to show 'man in continuity with life through technique' as originary, this second meaning is that which insists 'on the rupture (*rupture*) for which [man] assumes responsibility through science'.[22] In order to properly conceptualise what this rupture entails[23], we will have to define some terms: thought, knowledge, the scientific object, and the epistemological object. So as to foreshadow the next section, it should be kept in mind that this distinction (M1-M2) does *not* entail a grounding of scientific truth, nor does it give to philosophy a legislative role in determining scientific activity. Rather, the knowledge of life seeks to determine and delineate the conditions for the production of knowledge. The aim of this section, then, is to sketch some of the differences between philosophical thought and scientific knowledge.

First, what is thought for Canguilhem? While it is true that he did not develop a systematic theory of knowledge, the reason for this is that he followed Bachelard in claiming that philosophical thought is necessarily tied to the advancements of science and thus must change in order to reflect those advancements. In this view, thought is 'nothing but a disentangling of man from the world that permits us to retreat from, to interrogate, and to doubt (to think is to weigh, etc.) in the face of obstacles that arise'.[24] Thought arises in relation to the obstacles that emerge within our experience of life.

As life is a dynamic organisation that makes attempts in all directions, the vital activities of living beings that, as we saw above, can entail the

22 Canguilhem, *Knowledge of Life,* p.97.

23 This idea of a rupture that is at work in scientific thought stems from Gaston Bachelard's view that there is a break or rupture 'between observation and experimentation' or 'sensory knowledge and scientific knowledge'. See Bachelard, G. *The Formation of the Scientific Mind*, trans. by Mary McAllester Jones (Manchester, Clinamen Press: 2002), p.30 and p.237 respectively. I think Canguilhem's work could be described as an attempt to naturalize this epistemological claim.

24 Canguilhem, *Knowledge of Life,* p.xviii.

interacting with one's milieu by means of tools or machines (technique), will inevitably encounter obstacles to the continuance of these activities. Machines and tools break down, wear out or fail, new needs arise, the body itself breaks down or becomes ill, historical conditions change, etc. These obstacles, however, allow for one to learn and to understand. Obstacles engender thought and thought, in turn, can engender knowledge. The errors arising when thought is met by an obstacle are thus not failures of knowledge, but its condition of possibility. Thought is that which turns these obstacles into an object to be analysed, thereby allowing for new forms of activity. As such, thought is not that which seeks a harmony with life or vital interests, but entails the analysis of the obstacles that are posed to living beings and constructs possible solutions to them. These obstacles thus form the basis upon which a rupture occurs between knowledge and life since knowledge is no longer action, but implies an analysis.

It is here that Canguilhem differs from Bergson and the philosophies of intuition, since the thought or intellect that produces this knowledge does not destroy or petrify life;[25] rather, knowledge 'undoes the experience of life' such that it can understand life's failures and successes with an aim to 'remake what life has made without him, in him, or outside him'.[26] This understanding requires a break with what is given, with the immediate data of life. Within the continuity of life's productivity, this discontinuity of knowledge allows thought to get beyond immediate experience by constructing problems that allow for new forms and conceptualisations of life, and it does so without the need of a special form of knowledge, such as intuition. Moreover, this entails that knowledge is not the development of something inherent to human technique, as if human activity contained the seeds of knowledge. Instead, knowledge arises out of the failures and errors of such technique and as such discontinuity is a constituent feature. 'Knowledge always has its source in reflection on a setback to life. This does not mean that science is a recipe for processes of action but that on the contrary the rise of science presupposes an obstacle to action.'[27] Knowledge arises

25 The introduction to Canguilhem's *Knowledge of Life*, entitled 'La pensée et le vivant' is meant as a response to Bergson's text 'Pensée et le movant' (first published in 1946 and translated into English as *The Creative Mind*).

26 Canguilhem, *Knowledge of Life,* p.xviii.

27 Canguilhem, *The Normal and the Pathological,* p.222.

because activity hits upon obstacles that can thereby be represented as problems peculiar to those obstacles, producing a discontinuity between vital activity and knowledge.

In a late interview, Michel Foucault provides his own definition of 'thought' that can help to clarify this discontinuity at work in Canguilhem's second meaning of the knowledge of life:

> Thought is not what inhabits a certain conduct and gives it its meaning; rather, it is what allows one to step back from this way of acting or reacting, to present it to oneself as an object of thought and to question it as to its meaning, its conditions, and its goals. Thought is freedom in relation to what one does, the motion by which one detaches from it, establishes it as an object, and reflects on it as a problem. ... This development of a given into a question, this transformation of a group of obstacles and difficulties into problems to which the diverse solutions will attempt to produce a response, this is what constitutes the point of problematisation and the specific work of thought.[28]

With this description, rather than trying to discover (or secure) the infusion of thought into action, Foucault separates thought from activity with the intent to turn an activity into a problem to be reflected upon, which will thereby produce new solutions and new ways of acting. Problematisation implies the opening of possibilities, or the distancing of oneself from an activity within which one is caught. Similarly, Canguilhem describes the revision of norms in terms of a tenuous demand or freedom: 'the norm in matters of the human psyche is the reclamation and use of freedom as a power of revision and institution of norms—a reclamation that normally implies the risk of madness.'[29] Of course, this reference overlooks possible differences between Canguilhem and Foucault, but their shared concern for describing the nature of thought in terms of problematisation remains poignant.[30] For Thomas Osborne, this similarity is seen in how Canguilhem's concern for

28 Foucault, M. 'Polemics, Politics and Problematizations', trans. by Lydia Davis, in *The Essential Foucault*, ed. by Paul Rabinow and Nikolas Rose (New York, The New Press: 2003), pp23-24.

29 Canguilhem, *Knowledge of Life,* p.133.

being able to 'hold open the constant possibility of new problematisations of life' converges with Foucault's attempts to 'stimulate possibilities of imagination that were ultimately *ethical.*'[31] Both were concerned with thinking the 'problem' itself and thus used the methodology of problematisation, as seen in the second meaning of Canguilhem's phrase.

The point of this digression is to show that where the vitalist tradition and Canguilhem seem to converge regarding the productivity of life, we can begin to understand how they will diverge when it comes to Canguilhem's view that thought is a matter of objectifying an activity. This objectification is not necessarily that which brings us closer to life, as we saw with his view of knowledge as that which undoes the experiences of life; it is, rather, that which implies a critical *distance* between knowledge and its object (stepping away from it) so as to question it, thus entailing the ethical value[32] of ensuring that other problems are possible.[33] In this view, philosophy 'cannot adopt anything but a critical attitude'.[34] As opposed to an affirmation of life's creativity by means of a supposedly immediate and intuitive knowledge of it, Canguilhem's position implies that thought is a critique of the values produced by the activities of living beings: 'philosophy is a questioning

30 See Osborne, 'What is a Problem?'; Rheinberger, H.J, *On Historicizing Epistemology,* trans. by David Fernbach (Stanford, Stanford University Press: 2010); Lecourt, D. *Marxism and Epistemology: Bachelard, Canguilhem, Foucault*, trans. by Ben Brewster (London, NLB: 1975). All see a continuity between Canguilhem and Foucault within the tradition of French (historical) epistemology. Lecourt argues that this continuity is established based on a shared commitment (following Bachelard) to 'non-positivism' in epistemology and 'non-evolutionism' in the history of the sciences (Lecourt, *Marxism and* Epistemology, p.125).

31 Osborne, 'What is a Problem?', p.12.

32 In Canguilhem, G *Ideology and Rationality in the History of the Life Sciences*, trans. Arthur Goldhammer (Cambridge, MIT Press: 1988), he describes the 'ethical criteria' that epistemology gives to a history of science in the sense of 'a set of criteria for judging which moves within the vast expanse of the past are legitimate and which are not' (p.4).

33 Osborne, 'What is a Problem?', p.10.

34 Canguilhem, G. *A Vital Rationalist: Selected Writings from Georges Canguilhem*, trans. by Arthur Goldhammer, ed. by Françoise Delaporte (New York: Zone Books), p.384.

of life and therefore a threat to the idea that everything necessary to life is already in our possession.'[35]

However, one further distinction needs to be made. The scientific object is not the same as the epistemological object (what Canguilhem calls the object of the historian of science). In an essay entitled 'The Object of the History of Sciences,'[36] Canguilhem describes three types of objects. First, there is the natural object, or the object as it exists outside of all discourse about it, particularly scientific discourse. The scientific object is that which is cut out of this nature by means of propositions and theories that are testable and falsifiable. The natural object forms a 'pre-text' for the scientific object, but the latter cannot be derived from the former since science constructs its object through its methodology. This entails that scientific claims to truth are eminently historical. As Hans-Jörg Rheinberger describes in a commentary on this same essay: 'The "truth of today" is not perennial, it is deliberately qualified as "of today," and it is not perennially related to an unchanging "nature".'[37] Science becomes historical not because its object is historical; what it determines as its object is based on historically determined questions or problems and thus, in a sense, its object is without a history. Instead, science is historical because the very definition of its activity entails that 'in order to remain science it has to supersede itself. It *is* science only in the process of a permanent *becoming*'.[38] This permanent becoming of scientific advancement implies that it is irreversible precisely because it continually corrects itself. Canguilhem thus pleads for a non-teleological view of science, even while viewing science as an axiological activity, or the 'search for truth'.[39] Science has its own norms and scientific inventions 'were responses to questions which [scientists] asked themselves in a language which they had to forge'.[40] It is the forging of

35 Ibid.

36 Canguilhem, G. 'The Object of the History of Sciences', trans. by Mary Tiles, in *Continental Philosophy of Science*, ed. by Gary Gutting (Oxford: Blackwell Publishing: 2005), p.203.

37 Rheinberger, H.J, Rheinberger, H.J 'Reassessing the Historical Epistemology of Georges Canguilhem', in *Continental Philosophy of Science*, ed. by Gary Gutting (Oxford, Blackwell Publishing: 2005), p.190.

38 Ibid. p.190.

39 Canguilhem, 'The Object of the History of Sciences', p.204.

40 Ibid.

this language that further exhibits the discontinuity of knowledge argued for in M2 above.

Understanding science as an activity governed by the norm of truth is where the history of science comes in: 'the object of historical discourse is, in effect, the historicity of scientific discourse, inasmuch as this historicity represents the carrying out of an internally law-governed project, but one which is traversed by accidents, retarded or deflected by obstacles, interrupted by crises, i.e. moments of judgement and truth.'[41] What I referred to above as the epistemological object, which as we can now see is a thoroughly historical object, is this history of science's search for truth. The epistemologist can discern the judgements made in history by being schooled in the latest scientific advancements and thus can also determine the non-scientific (for example, political or ideological) determinants behind some claims to truth. The historical epistemologist, then, recognises the critical and progressive nature of scientific discourse concerning that which is considered to be real, but in turn holds open the possibility that this object (the historicity of scientific discourse) be open to change: 'The object of the history of sciences is thus not an object given there; it is an object to which incompleteness is essential.'[42]

The rupture, then, with regards to the knowledge of life (M2) also implies that what 'life' is taken to be is historically determined. The questions to be asked today are not the same and do not have the same implications as those posed by Newton or Darwin. The role of the philosopher or epistemologist for Canguilhem, who was primarily interested in biology or the life sciences in general, is thus to reconstruct how these sciences conceptualise the behaviour and processes of living beings. The epistemologist thus seeks to uncover the conditions out of which scientific knowledge, i.e., claims to objectivity, is produced. With the rise of scientific knowledge, thought is not that which merges with life or appears as a continuation of vital process, as is technique. Rather, thought objectifies life, turning it into something to be studied. As such, a rupture occurs between knowledge and life, as life is continually reconfigured by the discontinuous advances of scientific knowledge.

41 Ibid., p.203.

42 Ibid. p.203.

This second meaning of Canguilhem's phrase reveals another aspect of his critical naturalism. Insofar as philosophy explores the history of concepts, it describes this history as one of problems (a search for the truth), in the sense that philosophy reconstructs the history of scientific concepts as a history of problems and this reconstruction, viewed in light of new knowledge, allows for conceptual correction. Here a philosophy of life reveals its ethical value of ensuring that *its object* (life, as understood via the life sciences) is open to change, that new formulations are possible. This position employs a critical perspective with regards to the knowledge of life. A scholar and practitioner of the sort of epistemological history developed by Canguilhem, Hans-Jörg Rheinberger, describes the important shift that this form of historical epistemology entails: 'a reflection on the relationship between concept and object from the point of view of the knowing subject was gradually replaced by a reflection of the relationship between object and concept that *started from the object to be known.*'[43] For Canguilhem, it is the activity of the living being that forms the natural conditions for thought (M1) and now serves as the object to be conceptualised (M2). As such, critical naturalism claims that the living object determines and shapes conceptual critique, rather than a subjectively or transcendentally bestowed meaning.

The knowledge of life is thus both that which is understood and problematised through concepts and that which is to be understood from within life's history. Canguilhem's work thus provides two aspects of critical naturalism: that thought is a natural product of life, and that, as thought is also the historical objectification and questioning of norms and experiences of life, it resists the hypostatisation of scientific objects. Critical naturalism gives priority to its object (the living being or life as

43 Rheinberger, *On Historicizing Epistemology,* p.3, my italics.

originary) to determine its own norms[44], but takes a critical perspective with regard to the historically changing knowledge of those norms.

Critical Naturalism and Conceptual Mediation

One final implication of Canguilhem's knowledge of life that solidifies the rift between his critical naturalism and the vitalist tradition needs to be explored. This implication was already hinted at in the preceding section, where it was claimed that the first meaning of the knowledge of life is not to serve as a ground for the second meaning. Can we go further by showing that both meanings are thoroughly mediated by scientific knowledge and that, for this reason, the vitalist claim to a non-representational, intuitive and, in some way, pre-scientific access to reality is problematic?

As we have seen, the role of the epistemologist for Canguilhem is to link the continuity between life and human technique with the discontinuity of scientific knowledge, while realising that scientific knowledge will continually reconfigure the relation between knowledge and life. Epistemology accepts that even science itself can change according to the new questions and problems that arise. However, this phrase 'knowledge of life' has to take on its full significance after the

44 This claim of critical naturalism gives priority to the object to determine the meaning of the concepts applied to it, is much inspired by Ray Brassier's insightful essay 'Concepts and Objects', in *The Speculative Turn: Continental Materialism and Realism*, ed. by Levi Bryant, Nick Srnicek and Graham Harman (Melbourne, Re Press: 2011). However, one point of contention seems to arise when Brassier refers to the 'identity' and reality of the object as that which determine conceptual meaning (p.55). This stress on identity seems to overlook or underplay the historical conditions underlying the very thinking in terms of 'objects' (see Daston, L. 'The Coming into Being of Scientific Objects', in *Biographies of Scientific Objects*, ed. by Lorraine Daston (Chicago, University of Chicago Press: 2000), pp.1-14). While Brassier rightly stresses that it is scientific representation that best describes this objective reality, it still remains unclear to what degree this identity is owed to the object itself, in terms of a bare existent, or to the historically contingent scientific representations of such objects. A possible clarification could arise in his suggestion that while science is that, whereby we understand what an object is, science often 'changes its mind' (Brassier, 'Concepts and Objects', p.64). In my opinion, Canguilhem's stress on the historical constitution of the knowledge of life provides an interesting way to start from the object to be known, while recognising the historical determinations of this starting point.

aforementioned distinctions. This is after all 'knowledge' of life and knowledge, for Canguilhem, is that which science produces.[45] The reason that M1 is not a philosophical position that serves to ground M2 is because it too is thoroughly determined by scientific concepts. This might seem banal, but it has important consequences. The claim that nature or life is dynamic and capable of determining its own norms rests on the event of scientific knowledge produced by Darwinian evolution and by the recent advances in genetics and biochemistry. Insofar as the epistemologist would take the position of M1 (life's productivity) or at least employ it as a mode of thinking about M2 (scientific productivity), this is still done from within scientific knowledge. Canguilhem's descriptions of life in terms of an 'order of properties', as an activity centred by the living being, or as a 'normative activity', all imply the acceptance of the knowledge of evolution or the claim that organisms are produced by a complex interaction of individual differences (genetic, phenotypic, behavioural) and a changing environment.

In a short text on Canguilhem, Dominique Lecourt (2008: 75-77) describes the role of philosophy as that of penetrating into these specialised discourses, such as science, and in doing so allowing for the possibility of judging these discourses in relation to the lived experiences of individuals[46]. In other words, the living individual's struggle with its milieu (what was described in M1) is taken as a primary value that cannot be destroyed by scientific truth and that this truth has to be assessed in relation to this struggle. I would go further and argue that this value is precisely what is secured by the truth of biology, insofar as Canguilhem describes it.

For example, in one of his last texts, *Ideology and Rationality in the History of the Life Sciences,*[47] Canguilhem continues to argue that concepts such as normality and pathology are meaningful and axiological

45 In a series of interviews in the 1960s, Canguilhem claimed that 'a knowledge which is not scientific is no knowledge' and, moreover, that 'there is no truth other than scientific truth, there is no philosophical truth' (quoted in Rheinberger, 'Reassessing the Historical Epistemology of Georges Canguilhem', p.188).

46 Lecourt, D. *Georges Canguilhem* (Paris, Presses Universitaires de France: 2008) pp.75-77.

47 Canguilhem, G. *Ideology and Rationality in the History of the Life Sciences*, trans. Arthur Goldhammer (Cambridge, MIT Press: 1988). First published in 1977.

terms for biology. These concepts have meaning because sickness and death are real problems or values for the living beings that biology studies, despite the recent advances in linking biology to physics and chemistry. All living organisms that exist through the 'filter of natural selection ... are governed by certain norms of behaviour and adaptations. Questions about the vital meaning of those norms, though not directly matters of chemistry and physics, are questions of biology'.[48] It is thus not through any appeal to pre-scientific experience, but from within a scientific analysis of the relation between an individual and its environment that one is able to claim that normality is still a meaningful concept for biology. 'Normality is not a quality of the living thing itself but an aspect of the all-encompassing relation between life and death as it affects the individual life form at a given point in time.'[49] As such, normality is not a concept arbitrarily applied to a living organism and thereby only meaningful in relation to human discourse, but refers to the polarised activities of a living individual in its environment.

At its core, the knowledge of life is mediated by scientific knowledge. There is no immediate access to life, since the very concepts we use to describe life are themselves a result of historically accumulated knowledge about life itself. For someone like Bergson to claim that evolution is a creative process of overcoming obstacles there first had to be certain advancements in the knowledge of life and ruptures with previous ways of thinking (for example, Darwin). Thus, the intuition that life is creative is thoroughly mediated by scientific knowledge and does not escape such representations. While M1 would seem to put us in touch with some vital impulses of life, even that knowledge remains conceptually mediated. It is this insight that I feel helps to clarify the distinction between Canguilhem and certain vitalist tendencies.

This distinction can be further clarified by looking at Thomas Osborne's insightful essay 'What is a Problem?'.[50] There, he describes the similarities and differences between the tradition linking Bergson and Deleuze and the one linking Canguilhem and Foucault. He points out that for both Bergson and Canguilhem, there is an emphasis on thinking in

48 Ibid., pp.143-144.

49 Ibid., p.137.

50 Osborne,'What is a Problem?'.

terms of problems, or ofnthinking life in terms of a history of problems and creative attempts to overcome them. However, their approaches to this problematisation differ in a very interesting way: 'on the one hand, for Bergson one might say that it is philosophy that is the discipline that is closest to life – because philosophy is the discipline that proceeds precisely by discerning problematisation; whereas for Canguilhem, philosophical problematisation is essentially reconstructive and secondary; that is, one has to follow the problematisations of life itself as these are disclosed or 'exhibited' via the concepts of the life sciences.'[51] For Bergson, philosophy is that which is capable of determining which problems are properly posed, because it employs a form of thinking (intuition) that touches on, gets its force from, or sympathises with the movement of life itself.[52] Because philosophical thought is moved by this intuition it is capable of legislating or critiquing those forms of thought (intelligence) which would focus primarily on conceptually mediated access, such as science. By establishing this distinction between intuition and intelligence, Bergson's philosophy creates a position from which it can criticize: 'Bergson weaves a normative vitalism into his every vision of philosophy. And for Bergson this entails the re-composition of problems on the basis of a philosophical method; the re-composition of problems *into* philosophy.'[53]

Canguilhem's position, as we have seen, is quite different. Canguilhem seeks to naturalise epistemology insofar as he places the historical reconstruction of the problematisations of the life sciences within life itself as a 'problematising phenomenon'.[54] Canguilhem's stress on

51 Ibid., p.8.

52 Bergson, *Creative Evolution,* pp.176-177.

53 Osborne, 'What is a Problem?', p.9.

54 Ibid., p.9. Osborne clarifies that Canguilhem's project is a sort of naturalised epistemology 'if we take the problematisations of the sciences as in some sense the raw material of problems of life themselves.' This stress on the naturalisation of knowledge can also be found in Malcolm Nicolson's reading of Canguilhem as a realist and materialist in the sense that knowledge and values are based on the 'biological mechanisms for processing information and discriminating one thing from another.' See Nicolson, M 'The Social and the Cognitive: Resources for the Sociology of Scientific Knowledge', *Studies in History and Philosophy of Science*, 22.2: pp.347-369 (1991), p.356. Interestingly, Nicolson also claims that this aspect of Canguilhem, grounding sociology in biological mechanisms, 'might also serve as a useful antidote to irrealist and idealist tendencies within the sociology of scientific knowledge itself' (p.348).

conceptual critique is not legislative with regards to these sciences by trying to incorporate (or ground) scientific problems into philosophy or metaphysics, but simply problematises scientific concepts so as to ensure that knowledge is capable of new formulations or possibilities: 'Canguilhem's is not as such a normative project so much as a programme oriented, ethically in fact, towards the possibility of *normativity*'.[55] Canguilhem's naturalised epistemology, what I have called critical naturalism, is ethical by its use of critique to ensure that new problematisations can be formulated. Critique points out the limitations of our explanations by linking them to the biological and historical conditions of their production and thereby continually holds open the possibility of further knowledge.[56]

For Canguilhem, one arrives at a knowledge of life only by departing from, i.e., critiquing, immediate experience, and not by expressing an

55 Osborne, 'What is a Problem?', p.9.

56 While a detailed discussion of how this distinction between Bergson and Canguilhem could also be carried out in relation to Deleuze, insofar as Deleuze takes up Bergson's vitalist insights, such a discussion would deserve an entire essay unto itself. However, one recent critique of Deleuze is instructive here. In his essay 'Concepts and Objects', Ray Brassier points out that the result of Deleuze's univocal ontology (the view that all differences, even conceptual ones, are merely differences in being) is that of injecting 'thought directly into being so as obtain the non-representational intuition of being as real difference' (p.48). In other words, by claiming to have found a non-representational access to being as real difference, Deleuze argues that thought is inseparable from being (cf. Bergson's claims regarding the inseparability of epistemology and ontology in *Creative Evolution,* p.xiii) and goes so far as to claim that 'every thing thinks' and that 'all is contemplation' (see Deleuze, G. *Difference and Repetition*, trans. by Paul Patton (New York, Columbia University Press: 1994) p.74, p.75, p.254). Not only is thought in being, but being itself thinks. Thus, for Brassier, as the claim that 'all is contemplation' is prepared by the vitalist claim that all is force or power, it is Deleuze's vitalism that supports these pan-psychist claims (Brassier first develops this claim in his essay 'The Expression of Meaning in Deleuze's Ontological Proposition'). This view effectively prevents the thinking of being (or objectivity) as separate from thought (the discontinuity between knowledge and its object) and if this is done by injecting thought into being, then we seem led back to the problem of idealism. I do not pretend here that this is the definitive reading of Deleuze, but I do agree with Brassier that it is certainly one plausible reading of Deleuze and as such poses a problem. I point this out since I feel that it is Deleuze's debt to Bergson that actually further distances him from Canguilhem.

intuitive or immediate grasp of life itself. Such immediacy is what vitalism tends to suggest. In other words, because thought is intensive or driven by life's *élan vital*, a mobilisation of thought via intuition allows for immediate, non-representational access to the nature of life. For Canguilhem, the knowledge of life cannot be immediate, as it is essentially conceptually mediated.[57] As such, philosophy is that which articulates both the continuity between the living being who thinks and life itself (M1), as well as the discontinuity between this conceptual, scientific knowledge and life or the living being as its objects (M2). It is scientific knowledge that informs both M1 and M2. However, without acknowledging the discontinuity between knowledge and life that arises through scientific knowledge, philosophy seems doomed to the naïve claim that philosophical thought is somehow free of scientific knowledge, and the idealistic claim that it can ground such knowledge.

The aim of this essay was to lay the groundwork for viewing Canguilhem's work in terms of critical naturalism and to show how this contributes to an understanding of the relation between knowledge and life. An adequate conceptualisation of this relation, however, required a distinction between the continuity and discontinuity between these terms. The biological activity of living beings—the fact that they express values in relation to their modes of life by creating norms—is that reality which is at the basis of our conceptualisation (M1), but our understanding of this biological activity is historically determined (M2). It is through the knowledge of this separation of, yet dynamic relation between, the reality of the object and our changing conceptualisation of it that critical naturalism claims to avoid the traps of idealism. Canguilhem's critical naturalism does not imply anything inaccessible about nature itself, but is better thought in line with the view that conceptualisation is that whereby nature is made intelligible, even if this knowledge is always open to error

57 Cf. Frédéric Worms, 'Le concept du vivant comme philosophie première: de Canguilhem à aujourd'hui', p.143: 'Il n'y a pas plus de concept direct que d'intuition immédiate de «la vie» en général; ce qui est pour ainsi dire donné, mais qui doit faire l'objet d'un approfondissement conceptuel bien plus que d'une description phénoménologique, c'est la relation entre le vivant et ce qu'il s'oppose à lui'. In his text on the concept of the reflex from 1955, Canguilhem writes: 'On peut admettre que la vie déconcerte la logique, sans croire pour autant qu'on s'en tirera mieux avec elle en renonçant à former des concepts' (Canguilhem, *La formation du concept de réflexe aux XVII^e et XVIII^e siècles* (Paris, Vrin: 1977) p.1).

and correction. Thus, as critical naturalism claims that it is the reality of the living object that shapes our conceptualisation of it and that the determination of the living object *as* an object of knowledge is itself historically determined and open to change, it forces us to rethink the supposed inseparability of ontology and epistemology.

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Nietzsche's Non-Reductive Naturalism:

Evolution, Teleology, and Value

DAVID STOREY

Introduction

In this essay, I argue that Nietzsche intended his philosophy of the will to power, understood as a philosophical biology, as a solution to the problem of nihilism. Nietzsche was convinced that the rise in modernity of scientific naturalism and its thoroughgoing materialism, though widely regarded as a sign of progress and an overcoming of speculative metaphysics and anthropocentric worldviews, was premised on a dubious conception of nature, in general, and a disregard for the valuing capacity of life, in particular. For Nietzsche, the rise of positivism meant the 'decline of cosmological values' and that mere nature- a closed, materialistic, meaningless, mechanistic order- was all there is. Nietzsche's pronouncement that God is dead meant that the super-natural order in which human beings placed their highest hopes and values never existed in the first place, and that the dawning realization of this truth, when placed before the background of a nature without purpose or value, would lead to great confusion and disorientation about the meaning of human life.

But Nietzsche was no Romantic. He believed that the neat cosmological orders of the past were also nihilistic, since they mistook local and contingent valuations for cosmic and necessary values, and that the

modern understanding of nature appears meaning- and value-less only against the background of mythology. He thus envisioned the possibility that after the painful process of critique and the overcoming of pre-modern prejudices, of bracketing and unlearning the unfounded positings of magic, myth, metaphysics and even science, the way would be clear for a revaluation, one that was more attuned to nature as it is, not as the photographic negative of a projected ideal world. And given his conviction that life inherently values, that it has conditions for its own preservation and enhancement, his positive vision of nature includes a conception of natural value. Nietzsche's screeds against the 'human, all too human' character of valuation are aimed at previous valuations, not valuation as such. So Nietzsche's genealogical unmasking of metaphysical values, while proximally intended to debunk cosmic or objective values as human projections, is actually ultimately geared toward arriving at a positive vision of nature as value-laden.

Nietzsche's task was thus to accept and digest the 'dangerous ideas' of modern science—especially the theory of evolution—without succumbing to their nihilistic implications. As R.J. Hollingdale summarizes,

> The sense that the meaning of the universe had evaporated was what seemed to escape those who welcomed Darwin as a benefactor of mankind. Nietzsche considered that evolution presented a correct picture of the world, but that it was a disastrous picture. His philosophy was an attempt to produce a new world-picture which took Darwin into account but was not nullified by it.[1]

That, in a nutshell, is why the solution to the problem of nihilism involves the search for a new vision of nature, and why the pivotal concept is that of life. This is by no means an issue that has been settled by the neo-Darwinian synthesis. In 2003, in an article entitled 'Darwin's Nihilistic Idea: Evolution and the Meaninglessness of Life,' Tamler Sommers and Alex Rosenberg zero in on the connection between values and biology:

1 R.J. Hollingdale, *Nietzsche: the Man and His Philosophy* (London, Routledge and Kegan Paul: 1965), p.90.

> Darwinism puts the capstone on a process which since Newton's time has driven teleology to the explanatory sidelines. In short it has made the Darwinians into metaphysical nihilists denying that there is any meaning or purpose to the universe, its contents and its cosmic history. But in making Darwinians into metaphysical nihilists, the solvent algorithm should have made them into ethical nihilists too. For intrinsic values and obligations make sense only against the background of purposes, goals, and ends which are not merely instrumental.[2]

Nietzsche took humans' natural and unavoidable capacity for valuation as a sign that valuation is intrinsic to life. Nietzsche attempted to 'dehumanize nature' while 're-animalizing man,' but without lapsing into what we today would call scientific naturalism. His own naturalism is hard to place; it has been termed both a 'naturalistic transcendentalism' (Ralph Acampora) and a 'transcendental naturalism' (Keith Ansell Pearson). He rejected the mechanistic view of the animal (and the mechanistic view of the inorganic world) advanced in modern science and replaced it with what we might call a non-reductive naturalism that attributes some degree of subjectivity or interiority or self-organizing capacity to all things. So I suggest that Nietzsche's project falls within the category of 'non-reductive naturalisms,' which Ted Benton defines thus:

> A non-reductionist naturalism, making use of the ideas of a hierarchy of more or less autonomous levels of organization of matter, each with its own, qualitatively new, 'emergent' powers or properties has been one fruitful way of maintaining the insights of a naturalistic approach, without falling foul of what is valid in the anti-naturalistic critique. Such hierarchical, 'emergent powers' ontologies enable their advocates to recognize in the various subject matters of the different natural and social sciences more or less discrete and autonomous object-domains, while at the same time making no concessions to spiritualistic, vitalist, or supernatural beliefs.[3]

2 Sommers, T. and Rosenberg, A. 'Darwin's Nihilistic Idea: Evolution and the Meaninglessness of Life,' *Biology and Philosophy* 18 (2003): pp.653-658, p.653.

3 Benton, T. 'Naturalism in Social Science,' in *Routledge Encyclopedia of Philosophy*, ed. E. Craig (London, Routledge: 1998), retrieved August 8, 2010, from http://www.rep.routledge.com/article/RO11.

What Nietzsche is doing, in short, is trying to reconstruct the great chain of being without speculative supports in a way that is consistent with biological science. Below, I will lay out Nietzsche's naturalism by focusing on his view of biology because it is his point of entry for anchoring value in the natural world. My main purpose is to clarify Nietzsche's specific form of naturalism and his positions on Darwinian evolution, teleology, and values.

Nietzsche's Philosophical Biology

The complexity of Nietzsche's biology is reflected in his ambivalence towards Darwin. There is no doubt that Nietzsche intentionally opposes himself to Darwin; much like his dramatic portrayal of himself as the anti-Christ or anti-Christian, he commonly labels his views as 'Anti-Darwin.'[4] His chief objections to Darwinism are that it prioritizes the species over the individual, that it has a one-sided emphasis on self-preservation, and that it mistakenly posits that selection favours the strong rather than the weak.

Nietzsche explicitly names Darwinism as a form of nihilism. His notion of the 'last men' is no doubt deeply tied to the idea that modern humanity is undergoing a period of degeneration, cut off from its sources of vitality. As Gregory Moore has documented, 'Spencer's 'ideal moral man' is the prototype for Nietzsche's last man. It has to do with Spencer's claim that evolutionary development aims at the prolongation of life.'[5] Indeed, in section 373 of the *Gay Science*, Nietzsche lambastes Spencer's hope for an eventual 'reconciliation of 'egoism and altruism,'' insisting that 'a human race that adopted such Spencerian perspectives as its ultimate perspectives would seem to us worthy of contempt, of annihilation!'[6] Later in the same section, we read that 'an essentially mechanical world would be an essentially meaningless world.'[7] In this

4 See, e.g., Nietzsche, F. *The Will to Power*, trans. Walter Kaufmann (New York, Vintage Books: 1967), sections 647 and 685. Hereafter abbreviated *WP*.

5 Moore, G. *Nietzsche, Biology, Metaphor* (New York, Cambridge University Press: 2002), p.71.

6 Nietzsche, F. *The Gay Science*, trans. Kaufmann, W (New York, Vintage Books: 1974), p.335. Hereafter *GS*.

7 Ibid., p.335.

regard, he would seem opposed to evolutionary science, since it is life-denying and seems to rob humans of meaningful goals.

However, as Moore points out, Nietzsche had a 'lifelong fascination' with 'the far-reaching implications of the modern evolutionary worldview for the traditional areas of philosophical inquiry. Indeed the central project of his later thought—the much-vaunted transvaluation of values—rests precisely upon an appeal to the explanatory power of a newly confident biology.'[8] He continues: 'There can be no question that Nietzsche adopts a broadly evolutionary perspective: he believes in the mutability of organic forms; he sees morality, art, and consciousness not as uniquely human endowments with their origin in a transcendental realm, but as products of the evolutionary process itself.'[9] But what sort of evolutionary view does Nietzsche embrace? It is clear that he rejects a mechanistic account in which the environment does all the 'work' of selecting the traits and behaviours of the organism. And a materialism is out 0f the question: Nietzsche regards mere 'inert matter' not only as an abstraction from our experience of ourselves and of the world of living things, but as an inadequate explanation for the so-called inorganic world. What about a teleological account? Nietzsche never tires of arguing that there are no purposes in nature, no natural kinds with fixed *teloi*, whether determined by God or Nature; final causes are imputed by humans in order to make sense of the world. Perhaps a version of vitalism? Nietzsche's belief in a common life-force that governs the growth and development of all living things would seems to place him in this camp. He read and drew deeply from a number of influential biologists of his day that would later be deemed, and dismissed as, vitalists. Moore, for one, claims that 'Nietzsche reiterates the many errors and misunderstandings perpetrated by his contemporaries. Like them, he dresses up metaphysical and anthropomorphic views of nature in the language of modern evolutionary biology. The will to power is essentially a *Bildungstreib*, an amalgam as it were of a number of competing non-Darwinian theories.'[10] And Daniel Dennett, otherwise impressed with Nietzsche's appreciation for the power of evolutionary thinking, laments Nietzsche's resort to 'skyhook hunger,' i.e.,

8 Moore, *Nietzsche, Biology, Metaphor,* p.3.
9 Ibid., p.26.
10 Ibid., p.53.

speculation, by rejecting mechanism for the will to power.[11] However, given Nietzsche's resistance to positing abstract entities 'behind' phenomena in order to explain them and his acute sensitivity for the anthropomorphic tendencies of philosophers, perhaps we should not be too hasty in branding him a vitalist. Moreover, as we will see, we should suspend the orthodox assumption that anything that deviates from neo-Darwinism—mechanism, materialism, and scientific naturalism—is automatically spooky metaphysics unworthy of attention. There is certainly a serious tension in Nietzsche's thought between a more restrained, more scientific naturalism, and a more ambitious, speculative view of nature. What we need to determine is which pole predominates, and whether that view is tenable.

John Richardson has dispelled much of the confusion over Nietzsche's account of evolution. I will reconstruct and supplement his analysis here because it shows how Nietzsche can be read as a non-reductive naturalist and how values figure into life. The key to Nietzsche's theory of evolution, Richardson contends, is his conception of drives. 'Drives,' Richardson writes, 'are his principal explanatory tokens. He attributes drives to all life, and analyses organisms (and persons) as complexes of drives.'[12] Moreover, Richardson claims that the Darwinian dimension of Nietzsche's thinking actually renders it more plausible. He is getting at a difficult tension in Nietzsche's thought between a more metaphysical view of the will to power that falls prey to anthropomorphism or 'power ontology' (Heidegger's and Dennett's view), and a more naturalistic view or 'power biology' (Richardson's own position). Richardson's project is to show that Nietzsche's metaphysical vision of the will to power still rests on a naturalistic foundation, even though it goes beyond it. In order to spell this out, let us take a closer look at Nietzsche's biology from three angles: his views on Darwin, teleology, and values.

1. Darwin

To begin, as we saw Moore point out above, Nietzsche embraces Darwin's basic idea that humans are the product of a natural process of

11 Dennett, D. *Darwin's Dangerous Idea: Evolution and the Meanings of Life* (New York, Simon and Schuster:1995), p.466.
12 Richardson, J. *Nietzsche's New Darwinism* (New York, Oxford University Press: 2004), p.5.

terrestrial evolution, he agrees that natural selection plays a major part in determining organic forms, and he believes that much of human morality, religion, and culture can be understood in terms of this natural process. Indeed, Nietzsche was principally interested in doing what Darwin did only later in his career, in the *Descent of Man*: drawing the consequences of the evolutionary idea for human beings. It is tightly bound to his central motif of the death of God. As Richardson explains,

> Nietzsche associates with Darwin certain 'critical'—sceptical and nihilistic—lessons... He takes Darwin to have these critical consequences by his decisive step in naturalizing life—i.e., in explaining it by processes that are non-divine and indeed non-cognitive... Part of Darwin's insight is just evolution itself: species become, are created and destroyed, including the human species. But more important is his account of what drives that evolution: a struggle or competition in which all organisms—ourselves included—are engaged.[13]

So Nietzsche regards Darwin's discovery as a solid support for his general view of modernity and project of debunking false world-views and values. Darwin's dangerous idea has to be digested.

As we turn to the disagreements, it is important to keep in mind that, as is sometimes the case with Nietzsche,[14] his knowledge of his subject—in this case Darwin—is gained second-hand: his main sources are Spencer and a number of Darwin's critics. It is therefore unsurprising that, as Moore notes, Nietzsche's view of evolution cleaves closely to Spencer's: 'Like the activity associated with Spencerian evolution, the will to power is a development from the simple to the complex, and takes place...on a cosmic scale. Nietzsche's concept of *Entwicklung* [development] thus has more in common with Spencer's understanding of evolution than it does with Darwin's.'[15] However, Richardson has carefully shown that a

13 Ibid., 15.

14 Nietzsche's views on Buddhism are another example of this pattern. While he attacks Buddhism for its purported pessimism and life-denying spirit, his knowledge of it was at best limited and at worst wrong, and his own mature views have a deep affinity with much Buddhist thought, especially the Mahayana tradition. See Parkes, G. ed. *Nietzsche and Asian Thought* (Chicago, University of Chicago Press: 1991), introduction.

15 Moore, *Nietzsche, Biology, Metaphor*, p.63.

number of Nietzsche's disagreements with Darwin are baseless, and that their views are actually in sync.

One major difference is that Nietzsche believes that Darwinism smuggles a moral prejudice into its understanding of life: a conception of progress in which organic forms develop toward increasing perfection, with humans as the crowning achievement of nature. This, he thinks, merely reflects the decadent and levelling spirit of modern culture, not the 'things themselves.' The spread of altruism, what Nietzsche regards as the latest incarnation of slave morality, results in the stifling of struggle and self-overcoming of distinctive and powerful individuals; it is not what it is presented as, the overcoming of egoism, but exactly its opposite; the justification of mass egoism. The well-intentioned attempt to stamp out brutish egoism actually conceals a subtler egoism, a tyranny against the instincts. The brutish animal spirits must be tamed by the hive-mind of the democratic, civilized, egalitarian order. Nietzsche thinks that this view of evolution, rather than connecting humans with their vitality and animality, actually represses them. So Nietzsche thinks that this view is nihilistic because it imputes a moral teleology to human history, and then inflates this teleology to encompass the development of life itself; it is thus supremely anthropomorphic.

Another difference is that he faults Darwin for framing the struggle of life as a struggle for *existence* in which the *physically* fittest specimens win out. As Richardson points out, Nietzsche 'misreads Darwinian 'struggle' as physical combat, and 'fitness' as muscular strength. So he takes the latter to exclude all the indirect devices he labels 'cunning.' But of course Darwin makes clear that organisms struggle in many different ways; see, e.g., his account of the cuckoo's instinct to lay its eggs in other birds' nests.'[16] Again, Nietzsche's misreading is probably due to his reading of Spencer, who famously coined the phrase, 'survival of the fittest.' Nietzsche objects to 'fitted-ness' because he thinks it is contaminated by the same moral prejudice mentioned above: the instinct to conformity, that the success of the organism lies in conforming or adapting itself to its environment, rather than creatively responding to and shaping it.

16 Richardson, *Nietzsche's New Darwinism*, p.17.

This brings us to a third disagreement, which really has two related facets. Whereas Darwinism held that the stronger individuals succeed, Nietzsche thought the reverse: that over time, it is the weak that come to dominate. The strength in numbers of the herd retards the development of higher types. A corollary of this is that Darwinism conceives of evolution in terms of the preservation of the species, whereas Nietzsche sees it as geared towards the production of exceptional individuals. As he writes: 'Fundamental error of biologists hitherto: it is not a matter of the species, but of bringing about stronger individuals.'[17] At *WP* 685, he says that 'growth in the power of a species is perhaps guaranteed less by a preponderance of its children of fortune, of strong members, than by a preponderance of average and lower types.'[18] Indeed, for Nietzsche, evolution does not take place merely by dint of organisms reproducing and passing on their type with modifications. There are two poles of evolution, the group and the individual, and only the latter truly evolves. Groups reproduce more effectively and are more stable. But individuals demonstrate the inner dynamism, the struggle that leads to the creation of new, higher forms and the subordination of lower, older ones. For Nietzsche, the strength of an organism consists in its ability to develop autonomously, not merely in reaction to its species or 'society,' as Moore notes: 'The hallmark of an evolving, higher organism is its ability to regulate the internal relationships of its drives, now severed from a collective, superordinate identity.'[19] The 'herd' exerts a tremendous selection pressure that, though initially a creative transcendence of another, older 'herd mentality,' has outlived its usefulness, no longer fosters growth, and retards future development. The main point here is that newer, more complex forms are rare, more fragile, and less likely to be replicated.

I want to pause the discussion of Nietzsche's disagreements with Darwin here in order to start to tease together the positive alternative that his criticisms imply. What we see coming into focus in Nietzsche's view of evolution is a dialectical process taking place at all levels of organization: first, a creative interpretation that organizes the world in

17 Nietzsche, *WP*, p.332.
18 Ibid., p.365.
19 Ibid., p.83.

such a way as to foster the growth and preservation of the organism; second, this settles into a stable pattern or form of life that guides the development of subsequent organisms; third, life conditions change, and the pattern ceases to foster growth and becomes an end in itself, bent only on preservation; fourth, a new pattern more attuned to the present life-conditions supplants it, and the process starts over again. For Nietzsche, 'growth in life' means 'an ever more thrifty and more far-seeing economy, which achieves more and more with less and less force....'[20] If we can read 'pattern' and 'economy' here as more or less synonymous with 'interpretation,' 'perspective,' and 'set of values,' we begin to see how Nietzsche attempts to integrate biology, psychology, and values in a non-reductive view of evolution. At *WP* 636, he describes perspectivism: 'My idea is that every specific body strives to become master over all space and to extend its force...and to thrust back all that resists its extension. But it continually encounters similar efforts on the part of other bodies and ends by coming to an arrangement ('union') with those of them that are sufficiently related to it: thus they then conspire together for power. And the process goes on...'[21] And power here is the ability to delimit and inhabit a horizon, a creative capacity of life. This is what Nietzsche means by interpretation:

> The will to power interprets—it is a question of interpretation when an organ is constructed: it defines limits, determines degrees, variations of power. Mere variations of power could not feel themselves to be such: there must be present something that wants to grow and interprets the value of whatever else wants to grow... In fact, interpretation is itself a means of becoming master of something. (The organic process constantly presupposes interpretations'[22]

Now back to our discussion of the disagreements with Darwin. The fourth point of disagreement is that Nietzsche appears to have adhered to a version of Lamarckism, or the 'inheritance of acquired characteristics.' While Darwinism holds that organic forms are gradually built up over long stretches of time by the selective pressures of the external environment, Lamarck believed that traits could be modified through behaviour and habituation within the lifetime of the organism, and that

20 Nietzsche, *WP*, p.341.
21 Ibid., p.340.
22 Ibid., p.342.

such traits could be passed on to offspring. Nietzsche was attracted to this latter, more horizontal form of evolution because it was more attentive to the life, behaviour, and development of the individual organism, instead of Darwinism's focus on the species and subjection of the individual to mechanical forces.

The final and most important disagreement concerns two points: the instinct for self-preservation and teleology. Richardson points out that this disagreement has to do 'with Darwin's stress (Nietzsche thinks) on survival or preservation, instead of on power or growth,' and that '[Nietzsche] conceives [power and survival] to be competing answers to the question of the end or goal of life: he takes Darwin to be claiming that organisms are 'toward' survival, and he argues that organisms are directed toward power. More specifically, he supposes that both of these are meant as goals of a 'will' or 'basic drive' of life, which is *zu* or *auf* or *um* them.'[23] Nietzsche's position on teleology is difficult to pin down. At *Beyond Good and Evil* 13, he says:

> Physiologists should think before putting down the instinct of self-preservation as the cardinal instinct of an organic being. A living thing seeks above all to discharge its strength—life itself is will to power; self-preservation is only one of the indirect and most frequent results. In short, here as everywhere else, let us beware of *superfluous* teleological principles.[24]

I think we should heed the word 'superfluous' in this quote: Nietzsche wants us to be on guard against projecting unfounded goals or ends onto phenomena; he is not saying that teleological explanation can be done away with altogether. Or is he? Plentiful passages—e.g., 'We have invented the concept 'purpose': in reality purpose is absent'[25]—emphatically deny purposes in nature. Nietzsche unquestionably rejects the classical model of teleology, which rests on a substance/accident and form/matter model of explanation, or a theistic account of teleology, in which the thing's form and end are patterned according to an idea in the mind of God, both of which posit a *fixed* end that guides a thing's

23 Ibid., p.20.
24 Nietzsche, F. *Beyond Good and Evil*, trans. Kaufmann, W. (New York, Vintage Books: 1964), p.21, my emphasis. Hereafter abbreviated *BGE*.
25 Cited by Richardson, *Nietzsche's New Darwinism,* p.20.

development and behaviour; indeed, it is this notion of natural kinds or essences that he takes Darwin's theory to have demolished. And yet, as Richardson wonders, 'these rejections [of teleology as such] seem at odds with his insistence on a will 'to' power. What can that towardness be, if *not* an end-directedness?'[26] What is going on here? My view is that Nietzsche's rhetoric about teleology is, as on many issues, hyperbolic, and that despite his critiques of previous forms of teleology, he does, as Richardson persuasively argues, embrace a qualified, more naturalistic form of the concept.

The second problem has to do with the status of the 'goal' of self-preservation, and it connects to the major issue I mentioned above: whether and to what extent Nietzsche embraces a kind of panpsychism that illicitly imputes mentality to all living things. Nietzsche was likely led down this path of thought because of his concern that Darwinists were representing the evolution of life in terms of modern historical progressivism—such as Spencer's conception of the survival of the fittest, the idea that 'later' is 'better'--thus mistaking one of the effects of human history for the cause of the evolution of life. He warns us not to 'set up terminal forms of evolution (e.g., spirit) as another 'in itself' behind evolution!'[27] Nietzsche thinks that though Darwinism is presented as mechanistic, it smuggles in a form of teleology—the will to life/existence/preservation—that he thinks is a degenerate, life-negating attitude, one that is actually divorced from the 'drive-life' of living things. Moreover, the mechanist plays a shell game with value, meaning, and purpose. He takes them all away from nature, but then has to explain how they emerge for consciousness in mechanistic terms; and he cannot account for his own ability to give a meaningful account.

But this presupposes an alternative understanding of life's directedness. And the danger is that this alternative at times smacks of an anthropomorphizing panpsychism or vitalism. At *WP* 636, we find: '[Physicists] left something out of the constellation without knowing it: precisely this necessary perspectivism by virtue of which every centre of force—and *not only man*—construes all the rest of the world from its

26 Richardson, *Nietzsche's New Darwinism,* p.21.
27 Nietzsche, *WP*, p.378.

own viewpoint, i.e., measures, feels, forms, according to its own force...'[28] And, at *WP* 647, the following: 'The influence of 'external circumstances' is overestimated by Darwin to a ridiculous extent: the essential thing in the life process is precisely the tremendous shaping, form-creating force working from within which *utilizes* and *exploits* "external circumstances".'[29] Let's take a closer look at Nietzsche's positive understanding of teleology.

2. Teleology: from the Mechanistic View to the 'Dynamic Interpretation of the World'

Though the conventional wisdom is that Darwin exploded teleology and embraced mechanism, his views on teleology are not so simple. Moore notes that

> Darwin's views on progress and teleology were ambivalent.... Darwin did believe in evolutionary progress: evolution was for him progressive in the sense that it pushed each form toward a higher level of organization within the context of its own peculiar kind of structure, with the result that its descendants were better prepared than their ancestors to cope with particular conditions of existence.[30]

Robert Richards, keen to save Darwin from the (neo-)Darwinists and to show how deeply his view of nature was influenced by Romantics such as Humboldt, Goethe, and Schelling, goes even further: '[Darwin] is thought to have conceived nature not organically but mechanistically—as if he had to reach back to physics to secure the basic principles of his biology.'[31] However, he continues, '[Darwin] never referred to or conceived natural selection as operating in a mechanical fashion, and the nature to which selection gave rise was perceived in its parts and in the whole as a teleologically self-organizing structure.'[32] And even Daniel Dennett, arch neo-Darwinist, allows the question to be asked: 'Did Darwin deal a 'death blow to teleology,' as Marx exclaimed, or did he

28 Ibid., p.339, my emphasis.
29 Ibid., p.344.
30 Moore, *Nietzsche, Biology, Metaphor*, p.29.
31 Richards, R. *The Romantic Conception of Life: Science and Philosophy in the Age of Goethe* (Chicago, University of Chicago Press: 2002), p.514.
32 Ibid., p.534.

show how 'the rational meaning' of the natural sciences was to be explained... thereby making a safe home in science for functional or teleological discussion?'[33]

The conceptual foundations of the teleology/mechanism debate reach back to Kant's philosophy of nature, and while I haven't time to sketch them in detail, I want to highlight a few brief points in order to situate Nietzsche's position on the matter. In this section, we're going to take a detour beneath the realm of biology and examine Nietzsche's critique of mechanistic thought, since the latter is crucial to his naturalism. The reason for proceeding this way is that Nietzsche's biology is not, as it were, simply biological. His critique of mechanism in biology led him to critique the mechanistic view of nature as such, and this finds him wading in metaphysical waters. His alternative view of teleology, which is based on his notion of drives, must be seen in this context.

In the third critique, Kant's investigation of teleology revolves around the phenomenon of the organism. Robert Richards relays Kant's view of organisms:

> for objects to be constituted organisms or as Kant also refers to them, 'natural purposes,' they have to meet the following criteria: their parts form reciprocal means-ends relationships; those parts come into existence and achieve a particular form for the sake of one another (through growth, maintenance, and reproduction); and the entire system has to be understood as resulting from an idea of the whole. No mere mechanism displays all of these features.[34]

Organisms present a special problem for the Kantian view of nature because they clearly exhibit a kind of order and structure, yet their purposive behaviour does not seem explainable by mechanical forces. As Richards explains,

> Natural phenomena, according to Kant, could only be scientifically and properly explained by appeal to mechanistic

33 Dennett, *Darwin's Dangerous Idea*, p.126.
34 Richards, *The Romantic Conception of Life*, p.66.

> laws. Such laws would specify the constituent parts of some entity as the adequate causes of the arrangement of the whole —that was the very meaning, for Kant, of mechanistic cause.... Kant thus maintained that biology could not really be a science, but at best only a loose system of uncertain empirical regularities...[35]

Kant deems teleological judgements about nature 'reflective' rather than 'determinate' because they do not involve the application of a universal rule to a particular instance. The latter, in other words, have a universal and necessary structure that issues from the categories of the understanding. The former class of judgements, Richards writes, are 'reflective' because they

> indicate two related features: 1) that a concept of the whole has to be empirically discovered by an initial examination of the parts; and 2) that such a concept is ultimately grounded not in a necessary requirement of nature—that is, in a natural law ultimately based in the categories—but rather in a necessary requirement of our reflective capacities.[36]

Since such judgements only express regularities, not necessities, they do not reflect the structure of the understanding and cannot in any sense constitute knowledge of the empirical world because they lack the form of universality and necessity. Only mathematical physics possesses this character, which means that, for Kant, biology is not really a science. He declares that since 'in each particular natural discipline, one meets only so much real science therein as there is mathematics to be met,' there can be 'no Newton of the grass blade.'[37] That is why he is led to dismiss any attempts at a non-mechanistic biology as nothing but 'poetic swooning.'[38]

So on the one hand, Kant banishes teleology from natural science. On the other hand, he maintains that we cannot help but understand living things in a teleological manner. But teleological principles cannot explain biological phenomena; we merely must act 'as if' they do. However,

35 Ibid., p.237.
36 Ibid., p.67.
37 Cited by Richards, *The Romantic Conception of Life*, p.242n.12, p.237n.86.
38 Ibid., p.237n.87.

Kant accepted the Newtonian view of nature as matter in motion governed by fixed mathematical laws. This is what motivates his dualism of a 'kingdom of nature' and a 'kingdom of ends.' Evan Thompson gives an excellent summary of Kant's bind:

> Kant sees the futility of appealing to any immaterial principle of vitality outside of nature as a way of understanding the self-organized character of life. The only other option he can envision is hylozoism, the doctrine that all matter is endowed with life. But this doctrine contradicts the very nature of matter, which according to Newtonian physics is lifelessness or inertia. Unable to get beyond this dilemma, Kant retreats to the position that self-organization can only be a regulative principle of our judgement, not a constitutive principle of nature.[39]

The way to unravel Kant's bind is by going after matter and mechanism. Kant's view of matter is not consistent with his commitment to mechanism. This view, developed in the *Metaphysical Foundations of Natural Science*, showed, Richards writes, 'that the analytical composition of the concept of matter was that of attractive and repulsive forces.'[40] Schelling would exploit this to develop an evolutionary view of nature to oppose Kantian and Newtonian mechanism. As Richards details,

> Following Kant, Schelling proposed...a concept of matter that revealed it to be a dynamic equilibrium of the forces of attraction and repulsion. Even according to the usual beliefs of dogmatic science, he observed, our experience of material objects and their qualities can occur only through the agency of forces that act on us. We can never experience even mediately material objects not expressive of force.[41]

'The qualities of matter,' he adds, 'thus displayed themselves as expressions of variously combined oppositional forces. In this way, organicity—the dynamic rebalancing of forces—constituted the

39 Thompson, E. *Mind in Life: Biology, Phenomenology, and the Sciences of Mind* (Cambridge: Harvard University Press, 2007), p.140.
40 Richards, *The Romantic Conception of Life*, p.130.
41 Ibid., p.130.

fundamental property of all natural bodies.'[42] Compare Nietzsche: 'The connection between the inorganic and the organic must lie in the repelling force exercised by every atom of force.'[43] 'The drive to approach—and the drive to thrust something back are the bond, in both the inorganic and organic world.'[44] As Schelling put it, 'the organic never indeed arises, since it was already there.'[45] This issues from Schelling's principle of 'dynamic evolution': 'One and the same principle unites inorganic and organic nature... Every product that seems now fixed in nature exists only for a moment, and is in the process of continual evolution, a constant transformation, which would only seem played out at a particular stage.'[46] The resonance with Nietzsche is obvious. What all of this adds up to, Richards writes, is that 'Nature had to be conceived as a progressive evolution, achieving ever-new productive moments, never at rest, but striving toward perfection.'[47] What this gives us, in lieu of an awkward dualism between the realm of natural necessity and that of freedom—with the frothy residue of 'sublime nature' residing 'beneath' the clockwork operation of the former—is a view of nature as a hierarchy of forms creatively emerging over time and governed by the same basic processes, with one level building on its predecessor, and with a general direction toward greater complexity and integration. The trick, for Nietzsche, is to advance this principle of organicism without adopting a mentalistic model, as if there were some force consciously foreseeing and designing organic structures, how to maintain creativity and dynamism at the inorganic and organic levels without substituting a metaphysical genie such as *Geist* for God (what Dennett derides as a 'skyhook'). So the question becomes: how we can recover a conception of natural teleology while avoiding anthropomorphism or a kind of intelligent design theory?

Kant's teleology has an 'as if' status in the context of an envisioned mechanistic explanation that has an 'is' status that corresponds to nature's empirical reality. But Nietzsche's aim is to pull the rug out from under this latter understanding of nature, to show that it is a bogus foundation,

42 Ibid., p.295.
43 Nietzsche, *WP*, p.342.
44 Ibid., 346.
45 Cited by Richards, *The Romantic Conception of Life*, p.306.
46 Ibid., p.299.
47 Ibid., p.297.

a conceptual abstraction. We represent the world as ordered in accord with our own practical needs. As he writes,

> In order to sustain the theory of a mechanistic world...we always have to stipulate to what extent we are employing two fictions: the concept of motion (taken from our sense language) and the concept of the atom (= unity, deriving from our psychical 'experience'): the mechanistic theory presupposes a sense prejudice and a psychological prejudice... The mechanistic world is imagined as only sight and touch imagine a world (as 'moved')—so as to be calculable—thus causal unities are invented, 'things' (atoms) whose effect remains constant—transference of the false concept of subject to the concept of the atom.'[48]

Nietzsche's attack on mechanistic theory is remarkably similar to Merleau-Ponty's attack on naturalism: both argue that scientific theories smuggle their concepts from sense-experience without acknowledging the debt. As Evan Thompson notes, Merleau-Ponty argues that 'the phenomenal domain supplies the meaning of physiological constructs,' and that 'naturalism needs the notion of form... but this notion is irreducibly phenomenal. Hence naturalism cannot explain matter, life, and mind, as long as explanation means purging nature of subjectivity and then trying to reconstitute subjectivity out of nature thus purged.'[49] The common strategy here is not to attack scientific naturalism from without by 'stacking' another principle or kind of being 'on top' of inorganic, mechanistically governed nature—as in vitalism—but to critique it from within—by showing that it is not so stable a foundation as its proponents suppose.

Much like phenomenology would attempt later on, Nietzsche's psychology is meant to be fundamental in that it is means to deflate the ontological pretensions of the natural sciences and trace their posits back to the constitutive activity of the mind; though Nietzsche does not use the language of intentionality, his notion of drives are always drives *toward*, and he thinks these are our primary data. Moreover, his view should not be seen merely as a precursor to an 'evolutionary psychology'

48 Nietzsche, *WP*, pp.338-9.
49 Thompson, *Mind in Life*, p.70.

that reduces all higher-order capacities to biological processes and rests on a scientific naturalism. For Nietzsche, psychology is not intended to apply merely to humans, but to the drives that constitute all things. When Nietzsche refers to psychology as the 'doctrine of the morphology and development of the will to power,' he is not restricting its scope to human beings. In attempting to explode the foundations of mechanistic science, Nietzsche was trying to combat what Heidegger would label decades later as the 'tyranny of physics and chemistry' over biology.

While there is much that is questionable in Nietzsche critique of mechanism and his alternative 'dynamic interpretation of the world,' I want to mention a contemporary perspective that complements Nietzsche's position: Evan Thompson's and Francisco Varela's autopoietic view of the organism as a self-producing and self-regulating system that enacts, brings forth, or constitutes a meaningful environment. On three points—causality, matter, and teleology—Thompson explains why strains in contemporary theoretical biology are pointing away from mechanism, neo-Darwinism, and Kant's restriction of teleology to the status of a regulative principle; Nietzsche's views in many ways prefigure these developments. First, Thompson explains why Kant's bind is 'no longer compelling' largely because of progress in science:

> two kinds of scientific advances have been decisive. The first advance is the detailed mapping of molecular systems of self-production within living cells. We are now able to comprehend many of the ways in which genetic and enzymatic systems within a cell reciprocally produce one another. The second advance is the invention of mathematical concepts and techniques for analysing self-organization in non-linear dynamic systems.... Many scientists now believe these are necessary principles of biological self-organization.[50]

Nietzsche's view of organisms as relatively stable configurations of drives that in some sense produce themselves, and that even cells cannot

50 Thompson, *Mind in Life,* p.139. Note that this view of the organism is quite similar to that offered by Heidegger in the 1929-30 lecture course. However, as we saw in the last chapter, Heidegger fails to integrate this theory of the organism with his account of human beings and his philosophy of nature.

be understood mechanistically, prefigures this view. Second, Kant's view of matter is outdated. As Thompson explains,

> Our conception of matter as essentially equivalent to energy and as having the potential for self-organization at numerous spatiotemporal scales is far from the classical Newtonian worldview. In particular, the physics of thermodynamically open systems combined with the chemistry and biology of self-organizing systems provides another option that is not available to Kant: life is an emergent order of nature that results from certain morphodynamical principles, specifically those of autopoiesis.[51]

Though he did not have access to the science we do, it seems that Nietzsche's basic intuition that mechanism would be superseded by a 'dynamic interpretation of the world' centred on quanta of energy was generally correct. Finally, Thompson explains why the autopoietic view underwrites a naturalized teleology or 'immanent purposiveness':

> The first mode of purposiveness is identity: autopoiesis entails the production and maintenance of a dynamic entity in the face of material change. The second mode of purposiveness is sense-making: an autopoietic system always has to make sense of the world so as to remain viable. Sense-making changes the physiochemical world into an environment of significance and valence, creating an *Umwelt* for the system. Sense-making, Varela maintains, is none other than intentionality in its minimal and original biological form.[52]

Here I think we have something very much like Richardson's notion of 'thin intentionality.' And this gets at Nietzsche's connection of interpretations, drives, and values: each organism interprets its natural environment based on its distinctive drives. And each interpretation, the way in which an organism constitutes its environment, is evaluative. As Varela puts it, '[sense-making] lays a new grid over the world: a ubiquitous scale of value.'[53] The key here is that Kant could envision teleology only in a transcendent, 'top-down' fashion—that an intelligent

51 Ibid. p.140.
52 Ibid. p.147.
53 Cited by Thompson, *Mind in Life*, p.154.

mind designed the end toward which a thing develops—rather than in a 'bottom-up' fashion, as emerging through the interactions both within an organism and between it and its environment. So the picture that begins to emerge here is that Nietzsche follows Kant in rejecting transcendent teleology, but parts from Kant in embracing an immanent teleology.

To sum up the various strands developed in this subsection: Nietzsche was trying to build a bridge between the inorganic and the organic, on the one hand, and biology and psychology, on the other: to provide an interpretation of the world that could integrate matter, life and mind.

3. Values

Nietzsche is sometimes regarded as having a 'projectionist' thesis about values: namely, that values are not objective in any sense, but are merely subjective human projections motivated by practical needs and interests. There is no doubt that he sometimes speaks this way. To cite but a few examples: 'Whatever has value in the current world, has it not in itself, from nature—nature is always valueless—but one has once given it a value, as a gift, and we were those givers and gifters!'[54] 'The human first laid values into things, to preserve himself,—he first created a sense for things, a human-sense!'[55] These passages would appear to vitiate attempts to pin him to any theory of natural value, since values would merely be imputed to objects, but would in no way be metaphysically anchored in them.

However, we should not too hastily take remarks such as these at face value. For one thing, Nietzsche often hyperbolises in order to provoke; since he is criticizing the status quo, he tends to overcompensate by making his alternative sound more extreme than it actually is. Second, it is different to say 'nature is valueless' than it is to say 'natural things value or have value.' Since Nietzsche thinks that reality is composed of perspectives, drives, or wills to power, 'nature in itself' is just an abstraction; there is no 'thing' called nature, only the various perspectives that compose it. Third—and most importantly--it is beyond dispute that he held valuing to be an inherent activity of all living things:

54 Cited by Richardson, *Nietzsche's New Darwinism,* p.72.
55 Ibid.

'Valuations lie in all functions of the organic being.'[56] Or: ''Higher' and 'lower,' the selecting of the more important, more useful, more pressing arises already in the lowest organisms. 'Alive': that means already valuing.'[57] His project to 'naturalize values' is not so much to show how all human valuing is empty, i.e., has no referent, as to show that all values were creative responses to life conditions that, over time, became habituated into social norms and hypostasised as cosmic constants, and that values only exist *as* valued. As Richardson explains,

> A first important way in which he 'naturalizes values' is precisely by insisting on their dependence, as contents, on those activities of valuing—so putting them back into their natural setting. A value is always 'for' a valuing; it is an intentional object of that valuing and ontologically dependent on it. There can only be goods, as posited by a valuing viewpoint.[58]

There are no 'values in themselves' or entities with values as 'properties'—there is only valuing activity. For Nietzsche, activity as such is already evaluative. Valuing, for him, is not merely aesthetic or moral, but ontological; it is not even something beings sometimes do and sometimes don't—it is something they are. If beings are composed of nothing but drives, and all drives value, then beings value intrinsically; the drives that dominate will determine what the being values. So, contrary to the projectionist thesis, Nietzsche does reserve a place for the 'reality' of values. Richardson clarifies this:

> the dependence of values on valuings does not imply that there *are no* values; rather, it tells us what they are. There are values in the world... precisely because valuers have put them there, by their aims and intents. As I will put this point, he thinks that values are *real*... but not *objective* (i.e., values always exist for a 'subject'—construed very broadly to include the drive or will he finds in all organisms).[59]

56 Ibid., p.73.
57 Ibid.
58 Ibid., p.72.
59 Ibid., p.72.

Again, this follows from Nietzsche's critique of the mechanistic view of nature: when reality is no longer defined as externally related objects of matter in motion, casting value in terms of the valuation of subjects is no longer 'merely' (humanly) subjective, since subjectivity, in some form, is recognized as a constitutive feature of the real.

But how are we to understand the directed-ness of valuing, if not in cognitive terms? This is where Richardson's notion of 'thin intentionality' comes in. Drives, to paraphrase his definition, are plastic dispositions to behaviour. They are not blind mechanisms, as in behaviourism. This notion of plasticity is what Merleau-Ponty attempted to capture in his conception of 'structure' in his analysis of animal behavior in *The Structure of Behavior*, in which he draws on Uexkull's notions of *Bauplan* and *Umwelt*.[60] As Evan Thompson explains,

> [For Merleau-Ponty,] to say that stimuli play the role of occasions rather than cause is to say that they act as triggering conditions but not as efficient causes. To say that the organism's reaction depends on the vital significance of the stimulus is to say that the informational stimulus is not equivalent to the physical stimulus... Something acquires meaning for the organism to the extent that it relates (either positively or negatively) to the norm of the maintenance of the organism's integrity... Behaviour is, as it were, dialogical and expresses meaning-constitution rather than information processing.[61]

Plasticity preserves the organism's capacity to respond creatively to environmental pressures, and responses that are naturally selected constitute—but do not exhaust—that organism's 'good.' As Nietzsche writes, 'Every drive is the drive to 'something good,' seen from that standpoint.'[62] Again, we need not take Nietzsche's qualifier, 'from that standpoint,' to cancel the 'real' goodness realized by the drive. If the selection and stabilization of a drive comes to constitute a condition for

60 This view also closely resembles Heidegger's pre-Being and Time ontology of life. See Buchanan, chapter four for Uexkull's influence on Merleau-Ponty.

61 Thompson, *Mind in Life*, p.71.

62 Cited by Richardson, *Nietzsche's New Darwinism,* p.74. Below, I discuss the similarity of this view to Paul Taylor's biocentrism.

the preservation and enhancement of the organisms and its species, then we can say that that is one of the constitutive goods of that thing, so long as its standpoint persists or is subsumed by another in which the drive is subordinated to (but still foundational for) others.

Finally, (again) despite the neo-Darwinian view that Darwin offered a value-free view of nature, Nietzsche and Darwin share common cause in finding value in nature. Robert Richards argues that 'the usual interpretation of Darwinian nature is quite mistaken, that Darwin's conception of nature derived, via various channels, in significant measure from the German Romantic movement, and that consequently, his theory functioned not to suck values out of nature but to recover them for a de-theologized nature.'[63] 'Darwin's nature,' he asserts, 'progressively produced organisms of greater value.'[64] Moore also hits upon this progressive, hierarchical aspect of Darwinism yet, taking the accuracy of neo-Darwinism to be axiomatic, he perceives it as a weakness: 'For all Darwin's attempts to dissociate himself from the legacy of traditional biology, vestiges of the earlier, neo-Platonic concept of nature as a chain of being persist in his work. His metaphor of the tree of life... appears to suggest a hierarchical order of natural forms.'[65] True, but Darwin gave an account of how this chain arose in real time through a natural process without divine causality, and in that sense, his view is basically aligned with Nietzsche. To be sure, Nietzsche wants the emphasis put on organisms' valuation through their activity, rather than on them as passive bearers of value, but the parallel holds. If an exceptional individual executes a creative and adaptive response to the environment, his new behaviour can become an exemplar for others that, over time, gradually settles into a new structure that eventually becomes a new norm for that population or species (and alters its environment); to the extent that this new behaviour preserves and enhances the life conditions of that group, it should be construed as a new valuation, an increase in power, and a kind of progress. Given Nietzsche's unrelenting support for the hierarchical perspective, it can't be denied that he believed in a rank order in nature. Nietzsche embraces a *scala natura:* one supported not by theology or classical metaphysics, but by scientific and phenomenological findings.

63 Richards, *The Romantic Conception of Life*, p.516.

64 Ibid., p.553.

65 Moore, *Nietzsche, Biology, Metaphor*, p.30.

Conclusion

What we can take from this discussion is that Nietzsche provides us with a view of nature that is value-laden. He does this by liberating biology from mechanism, on the one hand, and naturalizing values, on the other. In doing so, he connects two of the major and seemingly disparate developments of the 19th century: the advent of biology and the rise of nihilism. As such, he provides us with a basis for the deep continuity of the human and the living. Moreover, he offers us a view of nature as hierarchically structured, in contrast to the 'flat' view bequeathed by modern science and philosophy. It recovers the depth and verticality of the traditional great chain of being, but it does so in a 'bottom up' fashion; the levels emerge progressively over time through natural processes, and depend on and evolve in relation to those before them.

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Imagism: Bataille and Prehistoric Life – A Review of Georges Bataille's *The Cradle of Humanity: Prehistoric Art and Culture*[1]

DAVID VAN DUSEN

Man is a beast, and man is not a beast. For Bataille this is a basic datum, a *donnée fondamentale*.

He has no real objection to the rhetoricians' conceit that man is the 'rational mortal beast'.[2] He speculates that it is a novel mode of labour, the creation of tools, that wakes reason; while it is a peculiar concern with the future, without which the tool is impossible, that wakes reason to death. 'Death in some way eludes the beast', Bataille writes here, but 'consciousness of death is a corollary of [human] work and of the waiting implied by [human] work.'[3]

1 Batailles, G. *The Cradle of Humanity: Prehistoric Art and Culture. trans. M. Kendall and S. Kendall* , Ed. S. Kendall (New York, Zone: 2009). I am indebted to Paige Normand for clear-sighted comments on a draft of this essay, which was originally commissioned by Hyperion: On the Future of Aesthetics, and will appear with discursive notes at nietzschecircle.com/hyperion.html.

2 'It is work that separated [*dégagea*] man from his initial bestiality ... that made of him a human being, the reasonable beast that we are [*l'animal raisonnable que nous sommes*],' Bataille, G. *The Tears of* Eros. Trans. Connor, P (San Francisco, City Lights: 1989) p.41.

3 Bataille, *The Cradle of Humanity*, pp.152–53. The translators correctly have 'Death in some way eludes *the animal*' here, and Bataille generally has *animal* over *bête* or *brute*, etc. For clarity of exposition, however, I will use 'beast' throughout, and

As rational, then, and as mortal — man is a *singular* beast. But if the Hellenistic definition may still hold, for Bataille, this is because what it holds amounts to a *contradictio in adjecto*. As *animal mortale rationale*, man is at once identified with reason's absence in the beast, with reason's abjection in death - and with reason. As *animal mortale rationale*, man is *and is not* rational, vital, bestial; or said differently, is *the* beast that perpetually lives 'in the presence of the ... negation of what he essentially is'[4].

It is not incidental that I have insisted here on the words 'man' and 'beast'. The usefulness of this *déclassé* term 'man', in what follows, is precisely that it includes the female within a term for the male (the singular, the categorical is duplicitous) while the usefulness of the prejudicial term 'beast' is precisely that it signals a negation of reason *in man*.[5] For what drives Bataille's 'analysis of origins' in the review essays, lectures, and sketches collected here is an original duplicity or intimate dis-identity of 'man' as male-female and 'man' as human-beast that he detects in 'the first tangible sign[s] left by man of his emergence in the world.'[6] It is this set of primitive and elusive duplicities, more than 'the origin of figurative art', that concerns him in this volume.[7]

Bataille here pursues the question of a 'prehistoric human *life*, hardly distinct from nature' and while he never hesitates to speak of 'cave art', and so on, he also underscores that 'these works were not, by any measure, at any time, objects of art.'[8] Prior to every cultural transformation or conception of art, what Bataille seeks to glimpse and to delineate is a mutation of *life* upon which all culture is erected and from which all art is descended.[9] The original question of 'culture' is a

generally modify Bataille's translations to that effect.

4 Bataille, *The Cradle of Humanity*, p.152.

5 Bataille remarks that it is 'with the word 'beast'' that we come to hear '*what is lacking* in the animal and ... those among us whose lack of reason [makes] us ashamed' (Ibid., p.84).

6 Ibid., p.39, p.59.

7 Ibid., p.134.

8 Ibid., p.4, p.77.

9 'The [Neanderthal] Mousterians ... had a prominent jaw and a beast-like neck and left us no works of art. The birth of art — which we cannot date precisely — coincides with a decisive *physical* change' (Ibid., p.106).

question of the origin and sexual propagation of a *species* — namely, of 'our species'[10] (149). It is thus not in the least strange that we regularly encounter ithyphallic males and eroticised females in prehistoric figuration: the *unnatural* image,[11] the original possibility of which is human sexual congress, is never less than 'a response to [human] desire' (115). But beyond such specific motifs in prehistoric images, Bataille's material here, and his question, is the florescence of a single beast's capacity to image every beast on the walls of rock-shelters and caves, and on the carved shafts of antler and bone.[12]

Disregarding the term's other senses, I will refer to this power and this compulsion as 'imagism'. It is this imagistic beast, the human beast, which senses and represents that it is, at once and enduringly, natural and unnatural, singular and self-divided. For Bataille, it is prehistoric imagism that first identifies and dis-identifies human-beast and, in a subtler but highly suggestive way, male-female. And according to Bataille, it is this set of duplicities that 'seems to have been ... the basis of all representation', and that seems, to him, to be discernible in man's oldest surviving representations.[13]

Imagism signals, from the outset, a strangely accomplished capacity for representation: a capacity of our remote ancestors to produce 'images intended to affect the sensibilities'.[14] Yet from the outset, imagism is in no way exhausted by visual observation and a consequent verisimilitude in carved or chromatic figures - that is, by naturalistic figuration. There is

10 Ibid., p.149.

11 As opposed to several varieties of strictly *natural* images that Plato refers to, for instance, in *Republic* VI: 'By images (*eikonas*) I mean, first, shadows (*skias*), and then reflections (*phantasmata*) in water and on surfaces of dense, smooth and bright texture' (Plato 1935, 510a). Or see the later discussion at *Sophist* 266a–67b, where such natural images (*eidōla*) are characterized as divine. See Plato. *The Republic: Books VI–X,* Ed. and trans. P. Shorey. (Cambridge, Mass., Harvard University Press: 1996).

12 This capacity to image 'every beast' is not to imply that archaic man *did* image every beast. Bataille remarks that the 'poetic animality' depicted in Paleolithic frescoes and carvings 'did not extend to all beasts: it did not include roaches or lice' (Bataille, *The Cradle of Humanity*, pp.75–76).

13 Bataille, *The Cradle of Humanity*, p.46.

14 Ibid., p.105.

evidence of a purely formal capacity for instantaneous representation that Bataille remarks in the earliest Franco-Cantabrian caves: 'outlines of hands.'[15] Chromatic hand-prints are found in the Lascaux (17,000 BP) and Chauvet (30,000 BP) caves, as well as in the caves of Africa and the Americas. There is also a profusion of geometric or abstract images in Magdalenian finds (18,000–10,000 BP), including a Mondrian-like, quadrilateral composition that Bataille reproduces in his 1955 *Lascaux* volume. In the writings collected here, however, Bataille has no interest in such non-figurative images.

This disinterest is initially perplexing, since he refers here to a 'transformation of meaning [that] took place during our time in the figurative arts: a transformation that rather abruptly displayed a process of decomposition and destruction', and later writes that only 'the mind that modern painting has permitted to grasp beauty beyond traditionally defined elements can be opened to ... primitive art.'[16] This decomposition of observed figures into self-determined form was well underway in Malevich, Kandinsky and Mondrian by the time Bataille wrote the first essay in this volume (in 1930[17]) and certain inter-war photograms by Schad, Ray and Moholy-Nagy could be seen as a close modernist echo of archaic hand-prints, i.e. of *immediate*, 'negative-impression' representations.

But on reflection, Bataille's disinterest in Paleolithic hand-prints and abstract images is less perplexing: he is similarly disinterested in a marked absence of terrain features and flora in the frescoes at Lascaux, Altamira, and other Franco-Cantabrian caves. In the panel of 'swimming stags' at Lascaux, for instance, in which a series of antlered beasts is (perhaps) depicted fording a river, there is no visual trace of the river , that is, of this mural's 'ground'. And it is the same with the numerous depictions of leaping and galloping beasts at Lascaux: the ground is rarely (if ever) given, while horizon and ground are alike immanent to the beast. And in the prehistoric 'apparition of the image' that signals the

15 Ibid., p.92, p.159.

16 Ibid., p.107.

17 As secretary of *Documents*, Bataille was acquainted with a number of the artists who initiated this 'process of decomposition' in the visual arts — Picasso, Miró, Giacometti, Masson, et al.

first emergence of a distinctly human life, for Bataille, it is primarily this fulgurous 'apparition *of the beast*' and its original relation to man's self-depictions, that intrigues him from the beginning.[18]

In the review essay 'Primitive Art', which he wrote a decade prior to the discovery of Lascaux, Bataille already indicates that it is a specific set of contrasts within archaic imagism, a striking and '*willful* alteration of forms', which promises 'to provide some insights into the [inner experience] of prehistoric man'.[19] This 'willful alteration of forms' constitutes a 'paradoxical fact'[20] that has several definite, interrelated elements in his 1930 article (the first collected in this volume) and Bataille returns to these elements in the other nine pieces collected here. In what follows, I attempt to lay out the elements of this 'paradoxical fact' in a way that Bataille never does; and it is this 'fact' that should provide a point of departure for future work on the significance that prehistoric imagism has for him — in the *Theory of Religion* and *Lascaux*, in *Erotism* and *The Tears of Eros*.[21]

One of the virtues of Stuart Kendall's collection is that it invites this sort of analysis of Bataille's lurching and revolving, in turns reticent and indulgent comments on prehistoric life. In effect, the translations here, which faithfully track shifts in his diction and mood, at once call for and make possible a new line of interpretation in Bataille research. This selection of his writings is itself a signal contribution to the Bataille literature, since it selects out a specific horizon in his theoretical work as a whole. His œuvre looks different in light of this collection — and it should.

According to a sketch from the summer of 1959, Bataille intended to open his *Universal History* with the *Vezère Valley* essay (chapter 9 in this

18 Bataille, *The Cradle of Humanity*, p.135.

19 Ibid., p.40, p.44. Here replacing 'psychology' in light of Bataille's later formulation, '... a less distant element in relation to [prehistoric] *inner* experience' (Ibid., p.124).

20 Ibid., p.50.

21 Cf. also Buchanan, B. (2011) 'Painting the Prehuman: Bataille, Merleau-Ponty, and the Aesthetic Origins of Humanity.' *Journal for Critical Animal Studies* IX, nos. 1–2: 14–31, which came to my attention after this review was written.

collection) and with this as a basis to proceed on to 'what is said in *Prehistoric Religion*' (chapter 8, here) and then to 'what is said in *The Erotic Image*' (here chapter 7). I will increasingly draw on these essays that Bataille would have used to introduce his final, unrealised work on eroticism and sovereignty, the *Universal History*.[22] But what are the prehistoric data that open up and direct his questions in these 1958/59 essays, and that suggest to him a newly 'universal' horizon?

(i) At least in the Franco-Cantabrian caves that he consistently privileges (Lascaux, Trois-Frères, Pech-Merle, Altamira, etc.), images of beasts predominate. Parietal images of man in these caves are relatively rare, and when he appears, man 'seems lost within a proliferation of beasts'.[23]

(ii) The beasts in Franco-Cantabrian caves are depicted, and pre-eminently at Lascaux, with a 'naturalistic perfection'.[24] Bataille writes: 'Regarding verisimilitude, the highest precedence always returned to the appearance of beasts on the walls of a dark cave'.[25] And it is presumably these 'vast, successive murals' of horses and aurochs, bison and ibex that lead Picasso to remark that the beauty of Lascaux 'has not been surpassed since.'[26]

Nevertheless, Bataille's primary inspiration, throughout the pieces collected here, is not simply the elegance and veracity of prehistoric beast-images. Their basic significance rather consists in what Bataille considers to be their place in a 'paradox proper to all prehistoric art,'[27] which is this:

22 According to a sketch dated 27 July 1959 that Stuart Kendall includes in the notes.

23 Bataille, *The Cradle of Humanity*, p.61. The Marquis de Nadaillac already remarked a scarcity of humans in prehistoric figuration in his Mœurs et monuments des peuples préhistoriques (Paris, 1888) — and to date, to my awareness, new findings continue to reflect it.

24 Ibid., p.168. 'This art is naturalistic, true, but naturalism attained, by exactly rendering it, what is *marvelous* in the beast' (Bataille 1955: 128; my emphasis).

25 Ibid., p.76.

26 Ibid., p.177, p.156.

27 Ibid., p.60.

(iii) In contrast to archaic man's 'incomparably captivating' depiction of beasts, there appears to be a 'nearly complete *loss* of the faculty of imitation when depicting human beings.'[28] This is the 'shocking duality at the beginning of figurative representation.'[29]

Within and *against* the 'graceful life' that prehistoric imagism bestows on beasts, Bataille detects an original 'repugnance for the naturalistic reproduction of human appearances'; within and *against* the flawless and evocative, seemingly ex-nihilo elaboration of prehistoric naturalism, a 'crude and deforming art was reserved for the representation of the human form.'[30]

Bataille repeatedly formulates this 'fact' and various suspicions regarding it: 'Apparently, man from the earliest times *could have* depicted [himself] with the same precision he used with images of beasts; he did not want to do this'; this 'leads us to think that there is some taboo affecting the accuracy of ... man's image'.[31] And this dim suggestion of taboo within the earliest traces of a distinctly human mode of production, viz. 'imagism', is by no means incidental: the possibility of interdiction, for Bataille, is as distinctly human as the possibility of representation. 'Man abides by interdictions', he writes, 'to which the beast is never held.'[32]

Bataille also writes in a fragment that 'representation is already murder', and I will return, below, to this decision to link up representation with

28 Ibid., p.60, p.67.

29 Ibid., p.40.

30 Ibid., p.60, p.148, p.40.

31 Ibid., p.107, p.61.

32 Ibid., p.165. 'If there is a clear distinction between man and beast, it is perhaps sharpest here: for a beast, nothing is ever *forbidden*. Its nature fixes the beast's [behavioural] limitations; in no instance does it *limit itself* ... [whereas] human life stripped of prohibitions is unthinkable' (Ibid., p.31; my emphases).

transgression.[33] The evidence for Bataille's basic 'fact', however, is not yet complete:

(iv) A human-beast duplicity is reflected in the female human form as well as the male, but not identically. The human-beast duplicity is differently elaborated in prehistoric male and female figurations, so much so that Bataille writes: 'In all the representations of prehistoric art, female figures form a third world, as much opposed to the world of men as to that of beasts.'[34] This is perhaps an overstatement, it is, regardless, an early one; and regardless, the most archaic depictions of human males and females have the following traits in common, on Bataille's reckoning:

(α) a certain debasement of technique, relative to the depiction of beasts, is in evidence — though most drastically with certain male figures;

(β) a certain idealization of observed form is also in evidence: 'there is a less "tangible veracity" for human figures than for beasts' [35]; yet

(γ) 'What seems to be fundamental is *the rejection of our face*' images of human males and females are alike characterized by the 'absence of a [human] face', and by way of this absence, the 'human aspect is ... suppressed.'[36]

The faces of beasts are invariably rendered, and at times with such sensitivity that researchers have identified the tear-ducts in large beasts' eyes. In light of this, and in contrast with it, 'what must continue to astonish us is ... the *effacement* of man' in prehistoric images.[37] And it is this 'effacement' that leads to a final characteristic shared by male and female figurations:

33 Ibid., p.182. On Bataille's notion of 'transgression' as a 'philosopheme' in the post-structuralist scene, with specific and sustained reference to his work on prehistory, cf. Guerlac 1996 and 2007.
34 Ibid., p.68.
35 Ibid., p.61.
36 Ibid., p.169, p.69, p.68.
37 Ibid., p.60.

(δ) it is common for male and female human figures, who are alike faceless, to alike be naked and discernibly eroticised. Bataille writes that 'most of the [prehistoric] male figures (painted or engraved on rock or bone) are ithyphallic', while 'the emphasis on ... sexual organs ... is even more marked [in prehistoric female figures] than in the representations of the masculine figures.'[38]

Thus far, several traits that human females and males have in common, and in contrast with beasts, in archaic figurations. The ways in which male and female images differ, and inflect a more radical human-beast duplicity, are no less essential for Bataille:

(v) If the human form is consistently rendered with less naturalistic precision than beasts, in prehistoric figurations, human females were yet 'the object of *more* attentive representations' than were human males.[39]

There is a bold negligence that can be observed, for instance, in the depiction of a male in the Lascaux pit or shaft, a scene that endlessly intrigued Bataille, that can never be observed in prehistoric female figurations. And whereas prehistoric naturalism has the heightening effect of 'manifesting the beast' and 'making it tangible', with the human male there is at times a savagely schematic treatment that suggests a desire to merely render his form 'intelligible'.[40] Bataille writes that this skeletal, ithyphallic man in the Lascaux pit is wholly 'negligible for the sensibility', and unlike any Lascaux beast-image or Venus statuette, 'appeals to our intellect, not our senses. It is an intelligible sign'.[41] This harshly reductive treatment of a human male in the Lascaux shaft is not, however, universal in Magdalenian images.

For instance, Bataille discusses Abbé Breuil's renderings of the so-called 'god' of Les Trois-Frères, as well as the man-bison with a 'musical bow', also at Les Trois-Frères.[42] These ithyphallic male images are figurative rather than schematic, but they are also partially theriomorphic: they

38 Ibid., p.113, p.69.
39 Ibid., p.168.
40 Ibid., p.51.
41 Ibid., p.55, p.50.

have been given the face of a stag and a bison, respectively. This theriomorphic masking of human males' faces in Les Trois-Frères has its parallel in the Lascaux shaft, where the schematised male is depicted with a bird's head.

This sort of theriomorphic masking can be observed in a host of Upper Paleolithic images, and Bataille exclusively develops the facelessness of male figurations in terms of this type of masking. Archaic 'man' represents itself as male by taking the face of a beast. Bataille sees here 'undoubtedly a promise of triumphal domination' over the world of beasts, 'but on the condition that humanity be masked'.[43]

(vi) If archaic 'man' as male is stripped of a face so as to appear with that of a beast, Bataille observes that archaic 'man' as female is stripped of her face absolutely. Bataille thus contrasts the prehistoric 'women with smooth faces' to prehistoric 'images of men with beasts' heads.'[44] He summarizes: 'The faces of these female figurines are never given the slightest bestial aspect, but, we must add, their human aspect is also suppressed. Most of the time, the [female's] face has the same slick, smooth surface as [her] posterior.'[45]

The Venus of Willendorf's face is a 'uniformly granular sphere', while the Laussel Venus' face is 'a kind of [blank,] irregular disk' and the celebrated Lespugue Venus is similarly 'deprived of traits, featureless'.[46] The *featurelessness of her face* is thus characteristic, for Bataille, of the human female in Gravettian and Magdalenian images.

42 Breuil's figures, such as a celebrated 'White Lady' in Namibia who has since been shown to have a *penis*, were still uncritically accepted when Bataille was writing. Bataille does note (Ibid., p.60), however, the interpretive element in some of Breuil's published images.

43 Ibid., p.63.

44 Ibid., p.69.

45 Ibid., p.68.

46 Ibid., p.69, p.112. The Venus of Dolní Věstonice (ca. 27,000 BP) could also be listed here, despite the angular and symmetrical slits in her face to perhaps suggest eyes.

Bataille notes possible exceptions to this pattern, such as a phallus-headed figurine unearthed near Lake Trasimeno in Italy and the *Dame à la capuche* from Brassempouy, France, whose ivory features have been cut, chiselled, and polished to give 'an impression of youth and great beauty'.[47] In recent years the dating of this Brassempouy head, discovered in 1892, has come into question; its extreme antiquity was uncontested when Bataille wrote. Yet he argued then that 'this unique face cannot cancel out what the absence of a face [in female images] or these animal faces [in male images] signifies for us' — namely, that depicting the human face was originally regarded as *obscene*.[48] And this pattern is not contradicted by the very recently unearthed, headless Venus of Hohle Fels, which is dated to the Aurignacian (35,000 BP) and considered to be the oldest surviving human image.[49]

The final element in Bataille's constellated 'fact' of prehistoric imagism, is this: while the depiction of beasts is generally marked by a precise and expressive rendering of perceived features; and while archaic 'man', as male and as female, is generally rendered faceless; yet human females are never drastically schematised like human males, but also never rendered with the naturalistic fidelity of beast-images. The figure of the human female is distinctly and consistently handled in prehistoric imagism.

(vii) In the most archaic depictions of the human female, most of which are statuettes, Bataille detects a specific *deformation* of the human figure and a specific *devotion* to it. 'It is not a question [with the statuettes], as in the cave paintings of beasts, of carefully observing a formal detail and reproducing it exactly'.[50] The Lespugue Venus, for

47 Ibid., p.113, p.69.

48 Ibid. Or, if nothing else, 'the predominant sentiment of Paleolithic man seems to have been that of his own *ugliness*' (Ibid., p.79). And Bataille's comment here on the Brassempouy head could perhaps be extended to the Dolní Věstonice head of a male, dated to ca. 29,000 BP.

49 This headless 'Venus' statuette was discovered in 2008, and has drastically accentuated breasts and a sharply defined vulva. Bataille discusses the headless, bas-relief females at Angles-sur-Anglin, which are "reduced, or almost reduced, to those parts of their bodies below the waist" (Ibid., p.69).

50 Ibid., p.108.

instance, 'is *at least* transmuted' and her sculptor 'could not have made her like this without a marked devotion'.[51]

Prehistoric images of human males are also transmuted, but whereas the transmutation of 'man' as male occurs *against or under the aspect of the bestial*, the transmutation of 'man' as female occurs *under the influence of male desire*. The so-called Venus statuettes are essentially 'a response', so Bataille suggests, to the primitive male's 'sexual desire'.[52] Yet the 'essentially symbolic value of these female images cannot be due to the abandonment of *all* observation: it only implies [a] passage to the ... level of that which signifies the genetic function' — namely, sexual propagation.[53]

Whereas a symbolisation of the human male — (for instance, in the 'pit' at Lascaux) reduces him to a rude concatenation of lines, to a bare suggestion of his ossature; symbolisation of the human female invariably consists, not in such reduction but in a wild and a fond insistence upon her flesh. She is all swollen breasts and belly, a frank sex and glaring breadth of buttocks — or what Bataille terms, in one note, a 'flower of fat' (*fleur de graisse*). She is *all* the promise of pleasure — which is to say, the promise of offspring. The oldest Venus' beauty *is* her fecundity, and conversely.

And yet, in this stylised depiction of human beauty there is still some 'holding back' of the 'aspect of [male desire's] brutality', since the gaze is not drawn directly to the statuettes' 'genitalia proper'.[54] Even in the Lespugue Venus, Bataille sees a certain restraint on male desire's 'constitutive violence', and suggests a minimal 'interval of time between the [sighting of] objects desired' and the 'realisation' of this desire 'to be

51 Ibid., p.107, p.111.
52 Ibid., p.110. Bataille's 'hypothesis of erotic preoccupation at the origin of the [prehistoric] female images' is, as he repeats, a *hypothesis* (p.110, p.113). And indeed, he first introduces the problems that arise with these images by saying: 'I don't even know how to speculate about this' (p.67).
53 Ibid., pp.111-112.
54 Ibid., p.115. 'In the Lespugue Venus / no contradiction between the genitalia and the statuette / between the reproductive function / [and] the flower of fat' (Ibid., p.203).

blunt, penetration'.[55] It is precisely this restraint, for Bataille, this willed interval that marks the birth of a distinctly human phenomenon: the erotic.

But in sum: if it is the beast that always overshadows and inflects prehistoric images of the human male, it is the human male that illuminates and transmutes archaic images of the human female, while the facelessness of male and female alike attests to a suppression, in the face of the beasts, of archaic man's singularity. The imagistic evidence of a primitive dis-identity of man and beast illuminates, for Bataille, a radical and abiding duplicity of 'man': 'the *constant* ambiguity of humanity is *originally* linked to this duplicity with regard to beasts'.[56] Man is a beast and man is not a beast. This, for Bataille, is what shines out in the oldest images produced by humans.

The living beast was depicted with such attentiveness, with such tenderness, because it was a life in which man nevertheless saw 'the promise of carnage and quarry'.[57] The beast was loved, and not as 'a thing': 'They loved these beasts and they wanted them. They loved these beasts and they killed them'.[58] And this is why 'representation is already murder', according to a fragment of Bataille's.[59] The murder in question here is not originally the slaughter of a man, though he also observes that 'man is the only beast that kills its kind obstinately and furiously'.[60]

Representation is already murder once a singular beast, man, has come to see the slaughter upon which his life, in its most primitive state, depends — as a 'murder'. That is, once a certain beast has come to feel a strange and unnatural unease regarding what it is, which, of course, requires that this beast is not simply what it is.

55 Ibid., p.117.
56 Ibid., p.78.
57 Ibid., p.81. 'The apparition of the beast was not, to the man who astonished himself by making it appear, the apparition of a definable object ... That which appeared had at first a significance that was scarcely accessible, *beyond* what could have been defined' (p.135).
58 Ibid., p.75.
59 Ibid., p.182.
60 Ibid., p.183.

Imagism is not exhausted by man's capacity to lastingly depict; that is, to imperfectly render present, or to render imperfectly present, a figure of what is observed or feared, desired or dead. Imagism, for Bataille, originally signals man's surreal capacity to lovingly depict a life it will destroy and to exult in and atone for this act of destruction, of 'murder', in the very act of depiction.[61]

But the duplicity that makes *this* possible is at once what makes 'murder', as such, possible. The very refraction of man's self-presence that makes possible lasting and unnatural representations, makes possible the peculiarly human unreality of interdiction or prohibition of a law. And all human law originally expresses this same ill-ease with what man is, as originally lawless; as originally a beast.

'Representation is already murder' because, for Bataille (and before him, for Kant, in his 'Speculative Beginning of Human History') with the primitive phenomena of representation and interdiction, a bestial life ceases to coincide with itself. The human is precisely a form of life that does not coincide with itself, which is why 'imagism', that peculiarly human power and compulsion, involves a mode of vision that does not coincide with itself. The unnatural image requires, at once, vision and a production of vision: a refraction of life in which sensation retains its primacy but loses its unicity — that is, its 'innocence'.

Nietzsche also anticipates this, in *Human, All Too Human*: 'In morality, man treats himself not as an "individuum", but as a "dividuum".'[62] And what Bataille glimpses in the first, effulgent images of our life on the steppes and in the caves, is that they signal a barely human, but an exultantly human duplicity that still arrests, and still eludes, our gaze.

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61 Here and below, cf. Bataille's discussion of 'equivocality' in the 'Prehistoric Religion' essay: 'The equivocality of this apparition [of the beast] ... called out to the hunter's murderous passion, the appearance of the living beast on the cave walls placed it in the perspective of death' (Ibid., p.136).

62 Nietzsche, F. *Human, All Too Human; A Book for Free Spirits*. Trans. M. Faber and S. Lehmann. (Lincoln, University of Nebraska Press 1996), §57.

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- Footnote references should conform to the style of the following examples:

  Immanuel Kant, *Critique of Pure Reason*, trans. by Norman Kemp Smith (London: Macmillan, 1929), hereafter *CPR*.
  Gilles Deleuze, *Foucault* (Paris: Minuit, 1986), p. 24.
  Daniel W. Conway, 'Genealogy and Critical Method', in *Nietzsche, Genealogy, History*, ed. by Richard Schacht (Berkeley: University of California Press, 1994), pp. 318-33 (p. 320).
  David Sedley, 'The Structure of Epicurus' *On Nature*', *Cronache Ercolanesi*, 4 (1974), 89-92 (p. 90).

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