

Keim:
An Introduction to the Nature of Death

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Robin Riemersma
Student Number: 3692361

Supervisor: Dr. Jesse Mulder
Second Reader: Prof. Dr. Paul Ziche
Third Reader: Dr. Niels van Miltenburg



Utrecht University

Abstract

This text aims to make a contemporary Hegelian analysis of the requirements for an analysis of death. By following Sebastian Rödl's *Categories of the Temporal*, I show that thought requires a temporal object. I then try to extend Rödl's framework by showing that the temporal object, as it is proposed in Rödl's book, has a number of deficiencies. These deficiencies can be resolved, I claim, by following the dialectical process of Hegel's *Wissenschaft der Logik*. In doing so, the temporal object of thought is shown to necessarily pertain to life. I then continue in the second half of this text by looking at the accounts of life in Aristotle's *De Anima* and the works of contemporary metaphysicians Michael Thompson and Jesse Mulder. These accounts, although not informed by Hegel's dialectic development, help us to understand how we can think of living beings. I then use Hegel's development of the categories of life to show that living beings are inherently bound to death. Their exact relation to death, however, is dependent on the type of living being under consideration. On my interpretation of Hegel, death is both that which shows living beings to be dependent on their, lower, material substratum and that which shows the necessity of higher forms of life. In this text, I do not fully develop the nature of death. Instead, I aim to show what is required to start analyzing death.

Ivan Ilyich could see that he was dying, and he was in constant despair.

In the depths of his soul Ivan Ilyich knew that he was dying but, not only could he not get used to the idea, he didn't understand it, couldn't understand it at all.

All his life the syllogism he had learned from Kiesewetter's logic – Julius Caesar is a man, men are mortal, therefore Caesar is mortal – had always seemed to him to be true only when it applied to Caesar, certainly not to him. There was Caesar the man, and man in general, and it was fair enough for them, but he wasn't Caesar the man and he wasn't man in general, he had always been a special being, totally different from all others, he had been Vanya with his mama and his papa, with Vitya and Volodya, with his toys and the carriage-driver, then little Katya, with all the delights sorrows and rapture of childhood, boyhood and youth. Did Caesar have anything to do with the smell of that little striped leather ball that Vanya had loved so much? Was it Caesar who had kissed his mother's hand like that, and was it for Caesar that the silken folds of his mother's dress had rustled the way they did? Was he the one who had rebelled at law school over the provision of snacks? Had Caesar been in love like him? Could Caesar chair a session like him?

Yes, Caesar is mortal and it's all right for him to die, but not me, Vanya, Ivan Ilyich, with all my feelings and thoughts – it's different for me. It can't be me having to die. That would be too horrible.

These were the feelings that came to him.

- Leo Nikolayevich Tolstoy, *The Death of Ivan Ilyich*, chapter 6

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Introduction

Death. The end for all living beings. Death is certain. Yet, our experience does not reach into it. We see others die, but none of us lives to relate the experience. Death is that which can seemingly only be grasped from the outside. Yet, it does not remain outside of us. We too will die. This contrast between the unreachability and intimacy of death has inspired many philosophical treatises by thinkers as diverse as Plato, Cicero, Aquinas and Heidegger. These thinkers were concerned with the question of how we could live our lives in the face of death. Yet, many of them had an insight that is sometimes lost in contemporary discussions: if we want to answer questions on how we can relate to death, then we need to know what death is. It makes a lot of difference to our views on the desirability of death if we, like Epicurus, think that we are somehow “gone” after death or if we, like Plato, think that we go on in some way. In this text I hope to contribute to exactly this question: what is the nature of death? I will not be able to answer this question fully. I will not enter into a debate of theology. I will not give a phenomenological description of *what it is like* to die. I will, most likely, not assuage many existential worries. I will not even be able to enter the question of what it is for us, self-conscious beings, to die. Although I will hope to clear the way for an understanding of the death of self-conscious being, in this thesis I will not be able to go beyond the preliminary steps towards this most vexed issue. If we are to make any steps towards tangling with the dread that the concept of death evokes, let them, if possible, be based on an understanding of the true nature of death more broadly speaking.

My analysis of death will start from the nature of thought. This can seem like a counterintuitive starting point. “Surely,” it might be objected, “we have some idea of what death is. Why do we need to think about thinking? We can see things that are alive. They feed, play around, sing, procreate or photosynthesize. At some point they get injured or old and then they die. Death is just when they stop doing those things. We just need to find some essential vital state or vital movement and that will determine whether something is alive or dead.” Some might even be more radical and think that even granting life is already too much. “What you call life,” they might say, “is ultimately reducible to physics. We try to find conventions that suit our intuitions, but such conventions break down because they rely on false assumptions. That is why it can be hard to say whether a virus, or some isolated organic molecules, are alive: life and death are just ways in which we like to characterize the world. Everything is dead in the deepest layer, and the dividing lines of our intuitions are unclear. Philosophy can help us to clarify those. If that is what you mean by looking at our own thoughts on the matter, then you are correct. Otherwise, you are mistaken.” This is, in fact, not what I mean. Both of these views rely on similar philosophical and metaphysical assumptions:

1. Insofar as there is dying, it is dependent on some view of life. Death is simply when life has stopped.
2. Life is some property or movement, either essential (real) or stipulated (conventional), that demarcates a class of objects. Life is thus parasitic on a metaphysical structure that already gives us objects.
3. The best way to find out what life is, is through some form of a reflective equilibrium.

For example, if we think that we can capture life by means of some property or movement, we could produce an empirical theory and then test it hypo-deductively by doing research and seeing whether all instances of life are indeed characterized by this vital property or movement.¹ If we think that life

¹ An example of this could be the idea that life is characterized by feeding on glucose. This seems like an adequate theory for many forms of life, but it excludes viruses. The theory could then be adapted, for example,

is merely a convention that relies on intuitions that we might have, we could produce a model that captures our intuitions. We would then produce thought experiments to see whether it holds in extreme cases.

All of these assumptions are in line with a certain view of what thought is, namely one on which thought is external to being. On this view, we think of beings in terms of objects and concepts. Life and death are concepts that selectively apply to certain objects. Often, these concepts can then be described by other concepts (for example, glass might be described in terms of silicon and oxygen atoms that are held together in a certain way). In chapter 1 of this text, we will make an analysis of thought and its relation to being. This analysis will show us that the three assumptions that we have outlined are all mistaken:

1. Death is not the simple negation of life, because:
2. there are no independently existing objects within which the concept of life determines a subset, which means that:
3. it is ultimately a pointless endeavor to create a theory of what death is and test it by means of individual cases under these assumptions.

A project that takes a reflective equilibrium (3.) as its methodology can produce a thriving industry of updating and attempting to refute certain models of life and death. This industry might even result in a coherent list of properties that capture most of our intuitions. Yet, such a model is flawed because it will always be open to another, perhaps unexpected, form of life that proves it wrong. It is not merely fallible; it does not take the implications of its own assumptions seriously and thus it cannot understand *why* it is time and time again proven false.² Properly analyzing thought will show that the correct philosophical methodology is that of *dialectic*. We show that death is a necessary moment in the development of the very *possibility* of thought. In doing so, we will show that thought is, at least, determined by *temporality*, *externality*, and *contingency*. Understanding these determinations of thought will allow us to gain a fuller understanding of the nature of death.

Lastly, one might ask: “What is the point? Why should we be concerned with the nature of death? Such an obsession with the end of life is pathological. We should deal with death by simply accepting its inevitability and for the rest ignoring it. By living our lives and not being concerned with the inevitable. By affirming our happiness. Philosophy should, instead, concern itself with the question of how to live, with ethics and politics. That will allow it to make our actual lives better.” I will not deny that this might be true. Yet, as we will see, the analysis of death provides us with an intricate metaphysical framework, the use of which extends far beyond merely our worries about our own death, or of the ones we love. If we want to work on such varying topics as the status of animals, persistence and life, then we will require an understanding that can sustain such inquiries. Death is a fundamental pillar on which these different topics rest.

by stating that it can be either feeding on glucose or bacteria, it could reject viruses as being alive, or it could be rejected and be replaced by a new theory. The problem, as we will see, is that we already require an understanding of living beings before we can discuss such movements as “feeding”.

² Proponents of this (or another incompatible) meta-philosophical position will likely require more convincing arguments than I provide here. For those readers, I ask that they simply see this text as a possible way to explore the topic of death. Perhaps in reading this text they will find that their intuitions with regards to their meta-philosophical position has changed as well. If not, then they should see this as a dialectical development of thought pushed to the an extreme. This extreme is death.

1. Time and Limits

What is thought? Moreover, why do I need to understand thought in order to grasp the nature of death? I can think about death, but that fact does not, in and of itself, teach me anything about death. It teaches me something about thinkers. Yet, such a question implies that I already know what it is to think and that I understand what it is to be thinking about death. Usually, thinking is itself considered as some property or activity of a certain object. In such a view, thought seems subject to a similar sort of analysis as death. Yet, thought is unlike any property or movement that can be attributed to an object. One does not just think, one thinks *something*. There is a content to a thought. Moreover, that content exists in a particular way. If I think something I can think something truly or falsely. Thought is characterized by truth. Emotions and desires, as they are commonly understood, are not thought. They are not defined by the possibility of being true or false. It might be true or false that someone has emotions or desires, but the emotion itself is not *about* something in such a way that it can be true or false. We might fear death, or desire it, but this does not suffice in order to learn about the nature of death itself.³ If we want to know the nature of death, then we need to be able to think it. Yet, this is seemingly not enough to warrant an investigation into the nature of thought as the start of a project on death. I could think many things that have no bearing on the actual world. I could think that Napoleon was a robot or that God feasts on a unicycle, but the fact that I would think those thoughts would not make them *true*.

What I will be concerned with, however, are not the specific contents of a thought. What concerns me in my approach to the question of death is the very nature of thought. I want to know which components make a thought a thought, so that I can know how death could be captured by one of those components. In other words, I want to know the *form* of thought. By understanding the form of thought, I can determine how we should come to understand death. Moreover, as we will see, I will capture the way in which death can *be*. In order to do this, I will follow the analysis of thought that is proposed by Sebastian Rödl in his *Categories of the Temporal* (CT). His understanding of thought will provide the framework which I will develop into an analysis of thought that allows us to understand death. Rödl's analysis of thought is inherently *temporal*. He shows that, if we think, then we think temporally. I will outline his dialectical derivation of the various forms of temporal thought. To that effort, I will provide a sketch of what Rödl thinks are the basic requirements for understanding thought in section 1.1. I will go into his analysis of the relation between thought and being. In section 1.2, I will follow Rödl's dialectical development of three forms of thought and show how he takes them to constitute a system. If Rödl's system was complete, then we could place death in his system and understand its nature. Unfortunately, as I will show in section 1.3, Rödl's temporal system cannot properly deal with *externality*. That is, it cannot properly deal with topics such as indeterminacy, interference and generation, which are nonetheless crucial to his system. In section 1.4 I will strive to develop his system so that it can deal with these problems by showing a parallel between the development that Hegel gives in his *Wissenschaft der Logik* of the Object and Rödl's system. By doing so, I will show that Rödl's CT needs to be developed to contain a principle of *life*.

³ This does not mean that emotions might not be "appropriate" or "correct" for a situation. Truth, however, is not mere appropriateness.

1.1 Situational thought

In CT, Rödl strives to develop the “logical forms” of thought.⁴ He states that the term “logic” has become unduly “constricted” to “formal calculi”.⁵ When we think of logic, we tend to think of the diverse systems of propositional, predicate or modal logic or as studied by contemporary logicians. Yet, this is not what he, or I, mean when discussing logic. Instead, logic is the study of the form of thought.⁶ Rödl explains: “Logic in this sense is nothing but thought reflecting upon itself, articulating what thought as thought knows itself to be.”⁷ Such an understanding of logic, he thinks, underlies even the Fregean project, which underlies many formal calculi to this day. Frege did not mean to merely build formal systems. He tried to capture the very nature of thought.

Let us take a step back to see what logic, thus understood, comes down to. Thoughts consist of elements.⁸ These elements are unified in such a way that they can be true or false. For Frege, these elements are, at the basis, *object* and *concept*. If we unify an object and a concept, then we come to something that can be true or false. “John is tall” is an example. Here, the thought consists of an object (John) and a concept (tallness) that are unified (is) in such a way that the whole thing can be true or false. An understanding of elements qua elements, in this case “object” and “concept”, is independent of whether John is truly tall.⁹ Understanding “object” or “concept” is a requirement for me to understand why a thought can be true (or false). Concepts that describe these elements of thought thus have meaning in virtue of their description of the form of thought. They have meaning because they describe something that plays a certain role in a thought. Rödl calls such concepts *pure concepts*, or *categories*, because they rely on thought alone.¹⁰ Categories are thus what they are because they pertain to the form of truth, which is the unity of the thought. Logic determines the categories and, thereby, how they are unified. So, if we want to understand death, then we need to understand what category it belongs to. Therefore, we first need to understand what categories there are.

Yet, why would we think that the categories of thought cohere with how things actually are? Indeed, we could make the case that the categories are what determine thought, but perhaps the world does not divide itself up into such categories. We find it hard to think of the world as consisting of quantum wavefunctions, but that does not mean that this is an incorrect characterization of the world. Rödl, however, wants to argue that forms of thought are the forms of being. Logic is metaphysics.¹¹ How does he argue for this? First, Rödl follows Aristotle. Metaphysics, as we contemporarily think it in his tradition, is the study of being qua being. It is the study that strives to find out what it is for something to be in as far as that thing is. And it does so in the most general sense. It does not strive to tell us whether there *is* a sandwich in my fridge, for example, but it strives to tell us *what kind of being* a sandwich is.¹² That is, metaphysics strives to find the *form* (or *forms*) of being. It strives to answer the question “What is?”. What does it mean to say that something is? Rödl

⁴ Sebastian Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding* (Harvard University Press, 2012), 1.

⁵ Rödl, 2.

⁶ Rödl, 21.

⁷ Rödl, 3.

⁸ There is, at this point, no reason to exclude the possibility that there is only one element in a thought and that this element is thus also unified. In section 1.2 we will see that this cannot hold.

⁹ Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 20.

¹⁰ Rödl, 29–30.

¹¹ Rödl, 22.

¹² The former does, of course, presuppose the latter. If there is a sandwich in my fridge, then it is there in the way that is characteristic for it or it would not be a sandwich at all.

claims that the world consists of facts.¹³ For something to be true means that it is a fact. Thus, when we have the fact “John is tall.”, the “is” does not refer to an element, a content of the fact. It is the form of being that gives John and tallness metaphysical import by making them into something true. The relation between the form of thought and the form of being becomes clear when we realize that a true thought *is true* when it states *what is the case*.¹⁴ Both are characterized in their form by truth. The logical copula, which unifies categories into a thought, is the same as that unification which allows for things to be the case. The form of thought is the form of being. All of this does not mean that our thoughts about the world are always true. Yet, by finding the categories of *thought*, we find the categories of *being*. Thus, if we can pinpoint under what category death can be *thought*, we find out in what way death *is*. That is, what role death can play in a fact. This is a requirement if we are to think seriously about the nature of death. If not, we would fall into, what Ryle calls, a category mistake.¹⁵ We could endlessly watch festive people and vehicles come by and wonder when the parade is coming. We need to know what we are looking for. We require a proper logic. A metaphysical logic.¹⁶

If thought is Fregean, then death could either be an object or a concept. If it is an object, then it could be determined in certain ways by concepts (for example, “Death is bad.”). If it is a concept, then it could be predicated of objects (for example, “John is dead.”)¹⁷ If thought is not Fregean, however, then trying to find out what kind of object or concept death is might not be so straightforward. That Fregean logic is, despite Frege’s ambition, not a metaphysical logic is, among other things, exactly what Rödl strives to show in the first half of CT.¹⁸ For Frege, Rödl claims, logic is *deductive*, and the categories into which thoughts are structured then derive from the deductive structure.¹⁹ However, such a view of logic, so Rödl argues, cannot be maintained. Instead of providing the structure by which thoughts can be thoughts, Frege’s system requires that such thoughts are *already structured*. Rödl connects this failure to establish a metaphysical logic through a deductive system to Russell’s paradox which revolves around Basic Law V of Frege’s system, which states that “two functions have the same value-range if and only if they everywhere assign the same value to the same argument.”²⁰ Russell’s paradox relies on the impossibility of having a function apply to itself. A function can only be given a truth value by a function once it is fully defined, but it can only be fully defined once it has given a truth value to itself.²¹ In Frege’s system, thoughts are only

¹³ I will not go into the details of why the world is facts here, Rödl does so in more detail in CT. This thought is also notably brought forward by the early Wittgenstein in propositions 1 to 1.21 of the *Tractatus*.

“1. Die Welt ist alles, was der Fall ist.

1.1 Die Welt ist die Gesamtheit der Tatsachen, nicht der Dinge.”

Ludwig Wittgenstein, *Logisch-philosophische Abhandlung : Tractatus logico-philosophicus*, ed. Brian McGuinness and Joachim Schulte, 2. Aufl., kritische ed. / (Frankfurt am Main: Suhrkamp, 2001).

¹⁴ Rödl’s argument is more nuanced than the one I present here. He also makes clear why it is not merely the case that a true thought “corresponds” to a fact. I do not fully elucidate it here as this would take too much space. Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 22–25.

¹⁵ Gilbert Ryle, *The Concept of Mind* (Hutchinson & Co, 1949).

¹⁶ For the scope of this text, I will assume that Rödl and Hegel are correct assessment of metaphysical being logical. One could enter into a debate with all the different philosophical positions which reject this and defend that the form of being is the form of thought. I will not do so here.

¹⁷ I do not go into higher-order concepts here.

¹⁸ This does not mean that Rödl wishes to deny the possibility of doing Fregean logic. It will just be derivatively dependent on his own temporal logic, which characterizes thought qua thought.

¹⁹ Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 21, 34.

²⁰ Rödl, 50.

²¹ Andrew David Irvine and Harry Deutsch, ‘Russell’s Paradox’, in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Winter 2016 (Metaphysics Research Lab, Stanford University, 2016), <https://plato.stanford.edu/archives/win2016/entries/russell-paradox/>.

structured into elements by virtue of standing in deductive relations to other thoughts. Yet such a deductive structure turns out to require pre-structured thoughts to which it can be applied. Thus, Frege's logic cannot be a metaphysical logic and that is what leads to Russell's paradox, which was historically the downfall of Frege's logic.²²

Luckily, Rödl presents us with an alternative: *transcendental logic*. Transcendental logic does not seek to develop the form of thought on the basis of its deductive structure, but rather on its relation to intuition.²³ Thoughts are determined by an external object.²⁴ Such a logic inherently has content: the contents determine something to be a thought. I see that Johnny the cat is sick and in perceiving this I can have the true thought "Johnny the cat is sick." The fact that this thought relates to my witnessing the illness of Johnny the cat determines this to be a thought. The thought and the witnessing are not separate. My witnessing of Johnny the cat's illness is my thinking it. This means that, in a transcendental logic, content and form are inherently tied. Thus, unlike deductive logic, transcendental logic can sustain itself as a metaphysical logic. That is, if we can make sense of such a logic. At this point, not much has been said about what a transcendental logic entails. Its principle is the relation to intuition, but we do not yet know what categories there are. This is what we have to develop if we want to know how death fits into a transcendental logic. Developing the categories of a transcendental logic is what Rödl does in the second half of CT and I will go over it in the next section. However, before we develop the categories we need to understand what it is for thought to be essentially related to intuition. We need to become clear on how thought is *situational*.

If we understand that logic is dependent on intuition, then we know that this means that thought must be dependent on *time*. I see things at a time. Rödl's claim is thus that thought is "essentially in time".²⁵ I perceive something in a situation. For example, *I now* see Johnny the cat playing with *my* sock. This does not mean that this thought is only true now. If I later think back to Johnny the cat playing with my sock, then that would still be a true thought. Moreover, it would be the same thought in a different situation. If you would think that Johnny the cat did not play with my sock, then you would be wrong. We would have a *disagreement*, but only because each of us thinks *what the other denies*. This means that a thought is had *in* a situation but is not limited *to* that situation. As Rödl states: "I can contradict you, denying what you affirmed elsewhere and elsewhen because truth does not depend on *who* thinks *when* and *where*, but only on *what* is thought."²⁶ This does not necessarily mean that my *expression* of the thought does not depend on the situation. Clearly, if I say "Johnny is demolishing my sock" now, it is true. But if I say the very same sentence later, when Johnny will be satisfied and sound asleep on a pillow, it would be false. At a later time, I express a different timeless thought with the same sentence. The situation thus changes which thought I express with the sentence "Johnny is demolishing my sock." It is, what Rödl calls, a *situational sentence*.²⁷

²² Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 50–52.

²³ One could of course wonder why we would have to assume that the forms of intuition are the forms of thought, i.e. why we can think what we perceive and perceive what we think. Rödl makes an extended defense of this in his "Eliminating Externality". I will not repeat it here. Rödl, 36–37; Sebastian Rödl, 'Eliminating Externality', *Internationales Jahrbuch Des Deutschen Idealismus* 5 (n.d.): 176–88.

²⁴ Rödl stresses that this dependence on an external object can also be *indirect*. This will become clearer in the last part of the next section. Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 55.

²⁵ Rödl, 58.

²⁶ Rödl, 61.

²⁷ Rödl, 62.

A situational thought is a thought that is expressed by situational sentences. If I wish to express the thought that Johnny is demolishing my sock at a later time, then I will have to say something like “Johnny was demolishing my sock.” As Rödl states: “It means that we can re-express it [a thought, RR] only *with a different sentence*: there must be another sentence that is used in such a way that, with it, we assert later what earlier we asserted with the original sentence. Situational sentences are *necessarily* coordinated in this way: what is asserted with one by means of a given time is re-asserted with another by means of another time.”²⁸ Situational thoughts are thus *speech act* forms, they determine how the thought can be manifested (i.e., expressed) in different situations. They make those sentences into something that can be true or false.²⁹ The thought, in turn, can only be thought *by someone* in as far as it is expressed in a sentence by the person who has the thought. This means that whenever I have a thought, I have it in a situation and the situation determines how the thought is expressed. In other words, when I have a thought, then “There is necessarily a time at which I think it, but no time at which I necessarily think it. The thoughts expressed with situational sentences break free from the given time as these sentences refer to one another across time.”³⁰ Thus, the manifestation of a thought in a situation is different from the manifestation of an act in a situation. If I perform some act that is relevant to the situation, then this is independent from other occurrences of such an act. For example, if I save my sock from Johnny the cat, then this is not the same act as when I save it again at a later time. Moreover, if you would not save my sock from Johnny the cat because you live on the other side of the world, then we would not be in disagreement. The order of *correctness* is different. In the case of behavior, for example, saving my sock, it is determined by the situation.³¹ In the case of a thought, the order of correctness is truth. The truth of some expression, however, is the same in all situations in which thinkers think the same thought. This is the difference between *situational behavior* and *situational thought*.

Now, why would we want to express thoughts with situational sentences in the first place? Thought is not bound to any situation, as we saw; it is independent of time. Why should we not express thoughts with sentences that capture this quality? Such sentences would be *eternal sentences* and the thoughts that they express are *eternal thoughts*.³² They express the same thought independently of the situation. As we will see in the next section, there are indeed such sentences. “Cats play”, for example, is a sentence that holds in every situation. It is a universal truth about the cat species that holds even if no particular cats currently engage in playful activity. Yet, what if we want to describe a particular situation? If I state “Johnny the cat demolishes my sock at t_1 ”, then this sentence seems to capture the same thought irrespective of time. Such an eternal, non-situational sentence seems much more aligned with contemporary scientific notations as well. I record truths in an eternal way by making use of an eternal temporal framework in which I place them. In the context of death, this seems especially tempting. “Here lies John, his death was no fun. 1919-1992” would be an example of a familiar form of expressing death. The tombstone eternally expresses the time of death. However, Rödl claims that eternal thoughts cannot do without situational thoughts. Eternal thoughts do not manage to capture direct intuitions. Rödl explains: “For, if it is essential for thinking what I think that I perceive what I think, then it is essential that I think it when I do. For what I perceive depends on the time: at one time, I perceive this, at another time, that. Conversely, thinking an eternal thought does not require specific perceptions; using an eternal sentence at different times, I

²⁸ Rödl, 65.

²⁹ Rödl states: “A thought, therefore, is that form of a speech act according to which the act can be assessed as true or false.” Rödl, 59.

³⁰ Rödl, 73–74.

³¹ Rödl, 75.

³² Rödl, 61–62.

forever perceive different things, and yet always express the same thought. Hence, eternal thoughts do not directly relate to intuition.”³³ His argument might seem unconvincing, but it becomes clearer once we understand what such an eternal expression entails. If we want to express an eternal thought about an intuition, then the particular situation of the intuition needs to be an element of the expression. Moreover, it needs to be an element that is independent of the situation. A date such as “1992”, however, *is* tied to a situation, it is anchored in a framework of dating that goes back to someone doing the equivalent of stating at some point that “Now *is* year 0” or “So-and-so many years ago *was* year 0”. Rödl discusses a number of attempts that try to forego situational thought. Ultimately, he shows that if we want to make temporality external to the form of thought, then we either do not have thought (but situational behaviour)³⁴ or we do not have *finite* thought³⁵.

At this point, nothing has been said about what the pure elements that allow sentences to be connected in a way that express temporality should look like. Rödl develops the form of these elements, the categories, in the second half of CT. At this point he has merely shown that such categories are necessary if there is any possibility of a finite thinker. The necessity of specific categories will need to be shown on these premises. If death can be thought in Rödl’s system, then the category under which it falls still needs to be derived.

1.2 Categories of the temporal

Rödl has shown that thought needs to be situational. That is, it needs to be structured in such a way that the situatedness is part of the *form* of the thought. Situatedness cannot be the mere content of a thought. Instead, situatedness is the structure which is required for there to be thought with content in the first place. The situatedness that Rödl discusses in CT is that of *temporality*. As we have seen in section 1.1, being a finite thinker requires more than just perceiving things at a time. Animals see things at a time and respond to them, but this does not mean that they can *think*.³⁶ Situational behavior suffices for such a mode of perception. If we are finite thinkers then we need to be self-conscious of the situations in which we think. We need to perceive that we perceive. Thus, temporality is not merely the circumstance of our perception, it is a requirement of the object of our perception. We, as subjects, see that we, as objects, perceive in time. Thus, the temporality which we perceive needs to be not just subjective, but objective.³⁷ The situations in which we perceive are objectively temporally structured in the same way as the temporal structure of our self-conscious perceptions. Situations are that manifold by which the finite thinker can think.³⁸

We have established that the object of thought can only be temporal. We can now turn to the requirements of the logic that describes situational thought. A thinker needs to be able to think the

³³ Rödl does not reject eternal thoughts as we will see later. Rödl, 63.

³⁴ This is the result of Rödl’s discussion of the indexical thoughts that are proposed by Tyler Burge and the tense logic that is proposed by Arthur Norman Prior. Rödl, 66–69, 99.

³⁵ What we would have, instead, is not a finite (that is, characterized by intuitions as we have discussed it) but an *infinite intellect*. Later on, Rödl beautifully describes such an intellect: “If there is a manifold of contents of His [the infinite thinker, RR] thinking, then this is not the external manifold of the temporal, but one in which each element always already contains all others.” This does not, however, entail that there is no room for such an “original intuition” which is a pure act and does not immediately depend on the situation. We fully know the categories of thought, for example, in every thought. Yet, thoughts need to depend on intuition and intuition needs to be finite, limited by an external object which with it is not united. Rödl, 77.

³⁶ Rödl, 122.

³⁷ Showing that objects of thought can only be objects of thought if they are, in fact, temporally structured is the goal of Rödl’s in depth analysis of Kant’s Analogies of Experience. I will not go into them here. Rödl, 125–26.

³⁸ As Rödl states eloquently earlier in the book: “A power manifests itself in an indefinite manifold of acts. And when we say that what I perceive depends on the time, we use “time” as the name of this manifold.” Perceptions are the intuitions of a situation. They are acts of the power of intuition, which in the case of temporality is itself a structured manifold called time or, alternatively, thought. Rödl, 64.

same thought at different times. This requires that there is a category that describes the possibility of a thinker, who, as stated, can think of himself through different situations: it requires that there can be something that stays the same in different situations, something permanent.³⁹ The category that expresses such a permanence is the objective principle of sameness. Rödl calls this category “substance”. He takes this term from Kant. “Alle Erscheinungen enthalten das Beharrliche (Substanz) als den Gegenstand selbst, und das Wandelbare, als dessen bloße Bestimmung, d. i. als eine Art, wie der Gegenstand existiert.”⁴⁰ The substance is the sameness that persists and allows for changing determinations in different situations. This interrelation is also how we can understand the self-conscious subject who intuits different things (i.e., is differently determined) in different situations. The second category that is required for the category of sameness to be meaningful is the category of difference: the thoughts that we have need to be able to have different contents with regards to different situations. Rödl calls this category “state”.⁴¹

Both substance and state seem requirements to have a situational thought, but to recognize them as categories we need to understand how they can be unified in a thought. It is this mode of unification of the categories that is crucial. If the unification is situationless, then the thoughts become eternal. There would seem to be no difference then between substance and state and the Fregean object and concept.⁴² Yet, there must be such a difference. We introduced substance and state specifically in our analysis of the possibility of thought, through the specification of situational thought. The situatedness of the thought needs to show itself through the unification. It is in this unification that we can express time and by which the temporality of the categories can be maintained. Rödl calls the mode in which substance and state can be unified “tense”.⁴³ If I have a thought in some situation, then I can have it again or I am not a thinker at all. With the categories of substance and state we have the means to express a change or non-change of content in different situations. The form of their unity should express the relation of the situation in which the content of a thought occurred and the situation in which the content is thought. As we have seen in section 1.1 this means that their unity should allow for different expressions. Thus, we can understand why Rödl calls the unity *tense*: Substance *S was* in state B, if the determination applies in a different temporal situation than my own, and Substance *S is* in state A, if the determination applies in the same temporal situation in which I am.⁴⁴ Tense thus gives rise to two expressions of a thought in a situated manner. It is this *is/was* that determines the proper unity of sameness and difference for a situational thinker. Thus, tense is, as Rödl states, inherently *bipolar*.⁴⁵ In this way, there can be different determinations of a substance: John was hairy, and John is not hairy. I saw that John was hairy, and I see that John is not hairy. We can understand different situations because we have both a category to unify them and one to differentiate them.⁴⁶ They are neither all unified into one situation, i.e. a complete set of determination of a timeless substance, nor are they made completely different, i.e. if the S of “S was A” and the S of “S is B” have nothing in common, then we are back at situational behavior. This is possible because their unification is inherently situated.

As it turns out, however, tense cannot be the sole form of thought. Tensed thoughts show us how things are at a certain time. A substance is determined by a state at that time. States can change, yet

³⁹ Rödl, 116–17.

⁴⁰ Rödl, 117; Immanuel Kant, *Kritik Der Reinen Vernunft* (Mayer & Muller, 1889), sec. A 182.

⁴¹ Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 117; Kant, *Kritik Der Reinen Vernunft*, sec. A 182.

⁴² Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 128, 134.

⁴³ Rödl, 128–29.

⁴⁴ A similar case could be made for the spatial situation by means of a *here/there*, but Rödl does not develop this in CT.

⁴⁵ Rödl does not wish to discuss the possibility of a future tense: “We disregard the future here as elsewhere.” Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 169.

⁴⁶ Rödl, 132.

a substance should remain the same if things can remain the same across times. Moreover, if things remain across time, then we should also see this in intuition. We should perceive substances that stay the same across different times. If this is not the case, then substance provide the permanence which its nature requires.⁴⁷ Yet, tensed thoughts cannot provide us with such an account of substance. A bare substance is not something we can perceive; it needs to be determined. If it can only be determined by a state, then we only perceive a substance in as far as it is determined at a certain time.⁴⁸ A substance, the very thing that ought to span different times, has then been reduced to the changeable state.⁴⁹ This will not do. Rödl states: “There has to be an empirical criterion for asserting that a substance persists and thus for asserting that that, which was F, is the same as this, which is G.”⁵⁰ As an example, we can say that “The apple was in the tree.” and “The apple is on the ground.”, but nothing within these tensed thoughts grant us the possibility of saying “The apple that was on the tree is the same one as the apple that is now on the ground.”⁵¹ Such an identity statement has to be implemented differently, it is not something that is or was the case (i.e., a tensed thought); it is a different form of thought. A form of thought that connects tensed thoughts.⁵² We need a category of temporal *extension*. In the case of temporality, such an extension means *duration*.⁵³ What we require is some mode of connecting different tensed thoughts, that is, different states of a substance. What we require is a movement. “The apple fell.” By such a statement we know that the apple on the tree is the same one as the apple on the ground. The states are connected when we perceive movements.

Rödl calls the category that unifies with the category of substance to describe temporal extension “movement form”.⁵⁴ As we have seen the unification of substance and movement form cannot be tense. Thinking movement forms in tensed thoughts would once again reduce the content to situations and thus to states. If we are to understand movement forms, then we require another mode of thought: aspectual thoughts. Rödl takes the term “aspect” because the unification is described by means of the contrast between progressive and perfective aspect, whereas for tense this was between past and present tense.⁵⁵ An expression in progressive aspect describes a

⁴⁷ Rödl, 147.

⁴⁸ Rödl, 149.

⁴⁹ Rödl considers the case in which there would be an unchanging “essential” state, as is proposed by Nussbaum and Putnam. Yet, as he shows, such a view cannot be maintained. If there is a determination of a substance that make it into the substance that it is, then such a determination is a priori and thus tenseless. Such a “temporal unity” requires another form of thought. As we will see such an essentialism will be found in *generic thoughts*. Rödl, 150–51.

⁵⁰ Rödl, 147.

⁵¹ I have taken this example from Rödl. Rödl, 151–52.

⁵² Moreover, as Rödl makes clear, even if a state remained the same then we could not say such a thing as such a judgment would still require a statement which crosses situations. The substance cannot even be changed by the lack of change if there are only tensed thoughts. Rödl, 149.

⁵³ Rödl, 144.

⁵⁴ Rödl calls this category a movement *form* and not simply a movement because it can be manifested at different times. It has a differentiation that shows when a movement is *still the same movement* and when it is *different*. State does not have this, it requires the movement form to show whether the substance *is still* in a state, or whether it is brought in this state *again*. Only the movements to and from states can repeat. This only makes sense as the comparison of states would require a category that transcends singular situations. One could think that, at this point, all that has been shown is that we require a category of movement, but Rödl is explicit in that there is only one category for this new form of thought and that it is movement form.

Movement is merely what happens when a substance is unified with a movement form. In other words, movement is when a particular substance manifests a certain movement form as a determination of it. Rödl, 163.

⁵⁵ Rödl, 153.

movement which has not come to completion. Perfective aspect, by contrast, describes a movement that has come to completion. If we want to understand aspect, then we need to understand how movement forms figure in thought. Movement forms, as we have seen, connect state determinations of a substance and are not reducible to these states. Movement forms show how a substance goes from one state to another. If a movement has fully connected two states, then it has come to completion: it has ended. Thus, completed movements are in the past. The closest they can get to the present is if the state in which they have terminated is a determination of a substance now. Yet, by definition, this requires that the movement *has already ended* and is thus before the now. If it was still completing now then it was an ongoing movement. As such, a perfective sentence does not come in two complementary tensed ways such as the progressive (“is doing” and “was doing”). A movement that is characterized by the perfective can only be perfective in one way (S “did” A).

Yet, a perfective sentence cannot exist without a progressive sentence. There needs to have been a time at which the change from some state to another was not yet completed.⁵⁶ If there wasn’t, then there would be no duration to a movement and thus no time. The movement form would reduce to a single situation (i.e. a duration of zero, because the start and finishing state are inherently identical, not merely the same sort of state) and become a state. Thus, there are also progressive unities of substance form and movement forms. These can be in the past or in the present: as long as a movement form started in the past it might connect states in a substance in a movement which had then not been completed. If it is present-progressive, then the movement was started and has up until now not been completed. If it is past-progressive, then the movement was ongoing before now. Thus, similar to how tense was bipolar, aspect is tripolar: S is doing/was doing/did A.⁵⁷ We can see this clearly when we look at the entailment among those three statements.⁵⁸ If the apple was falling to the ground, then this does not mean that it fell to the ground. By nature of the progressive aspect it is always before the completion, which means that there may have been an interference before the falling was complete. The apple was falling, but I caught it before it hit the ground. The sentences are necessarily related by the movement form, but irreducible to each other. Similarly, if the apple was falling to the ground, then this does not mean that it *is* falling. It could be the case that it completed its fall to the ground or that there was an interference. Yet, the reverse is true: if an apple *is* falling, then it *was* falling. Lastly, by definition, if the apple is falling to the ground, then it has not completed its fall.⁵⁹

In order to more fully understand what it means for an interference to occur in a movement form, we should look closer at the relationship between tense and aspect. As we have seen, a change of states cannot be understood merely in terms of tensed thoughts. Rödl provides us with a useful analogy: “A change of states does not stand to these states as a number to its predecessor and its successor, but as a line to the points that delimit it.”⁶⁰ Indeed, a movement form is what it is because it describes a change starting from a state of a substance and ending in another state. If John blushes, then he starts out pale and ends up red. The states are the points that limit the process, but are, at the same time, not themselves parts of the process. Tense not only limits, but also delimits aspect. Thus, it could be the case that I am walking to the kitchen and stub my toe in the hallway and stop before I get there. The movement of going to the kitchen has then been broken off, but I am still in a state. I am in the hallway. Moreover, I have *moved* to the hallway. This means that in breaking

⁵⁶ I purposefully refrain from saying “a time”, because, as Rödl shows, change is never *at* a time. Rödl, 168–70.

⁵⁷ Rödl, 155.

⁵⁸ “Thoughts are different if they do not necessarily have the same truth value; they need not have necessarily different truth values.” Rödl, 161.

⁵⁹ Rödl, 160–61.

⁶⁰ Rödl, 152.

off my movement of going to the kitchen I have completed a different movement: going to the hallway.⁶¹ This does not imply that I would not have completed the second movement if I had gone to the kitchen. The movement to the hallway would have still been completed. Yet, as we have seen, a progressive movement can *always be interfered with*. This means that for any movement A, there is a movement B contained within it in which A terminates if there is an interference. This nested quality goes on *ad infinitum*. For any movement form, there is a smaller movement form contained within it.⁶² Thus, Rödl argues, movements are continuous, and we learned this by pure reflection on the categories of thought. This shows how exactly we should understand Rödl's comment that movement is "open". The initial state of the substance that delimits a movement at some time is not temporally extended. Thus, at that time, the movement has not yet started. It is only once we have gone beyond this state that the movement has started. Because movement is continuous, there is always another time between the time of the initial state and whatever later time we consider to be the start of the movement at which the movement *had already started*. As such, the time which we had chosen as the start cannot be the start. An entirely analogous argument can be made for the end of the movement. Thus, following the metaphor of the line, it is like an open interval. Rödl concludes: "The presence of the object of a progressive thought is neither temporally atomic nor temporally limited. It is internally extended and open."⁶³ Thus, we can understand the relationship between aspect and tense in terms of beginning and ending: a movement does not extend all the way to its start- and end-state.⁶⁴ Thus, aspect requires tense. Tense, however, can only be understood if we can understand substance as actually connecting states. Thus, tense requires aspect.

Thoughts that are governed by aspect unify times into durations. The progressive mode of aspect requires that the manifestation of a movement form extends beyond a specific time (even the now). Because movement is continuous, this means that it can always be interfered with, in which case the end state of a movement form is not attained. For example, if I walk to the kitchen, there is no theoretical reason why I could not, at any time before I reach the kitchen, get distracted by Johnny the cat and decide to play with him. Yet, a movement form is characterized by its end state. Thus, we seemingly find ourselves in a conundrum: a movement can always be interfered with, but, if it can be interfered with, then it cannot be defined by an actualized state (i.e., a tensed thought).⁶⁵ At the same time, it is the relation to state that gave movement forms their necessary place in the categories of thought. Yet, any reduction of the determinations of movement forms to states would be untenable because, as we have seen, tensed thoughts cannot stand alone: they require aspectual thoughts. How can true progressive aspectual thoughts exist with corresponding false or undetermined (I take the latter to be the case for the present-progressive) perfective thoughts?⁶⁶ In other words, how can we say that I am walking to the kitchen, if there is no guarantee I will actually end up in the kitchen?

We cannot simply unify the perfective and the progressive. As Rödl states: "then the progressive thought and the perfective thought would no longer differ; there would be no contrast of aspect and

⁶¹ My example is closely related to Rödl's. Rödl, 165–66.

⁶² Rödl, 165–68.

⁶³ Rödl, 169.

⁶⁴ Rödl gives special attention to Anscombe's remarks on beginning and starting: "as I hope to justify on another occasion, I hold the verbs 'to begin' and 'to stop' to be in a certain sense logical words and not verbs with a distinct empirical content". This makes sense when we see that beginning and stopping show the governing limits of both tense and aspect. Rödl, 158; G. E. M. Anscombe, 'Before and After', *Philosophical Review* 73, no. 1 (1964): 22.

⁶⁵ Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 174.

⁶⁶ Rödl, 173.

thus no movement.”⁶⁷ It is paramount that the movement can be interfered with. There must have been a change from a state to another state if there was movement. Yet, as we have seen change is continuous, so within that change there are smaller changes. That means that the change could have stopped when one of those smaller changes was completed. This means that there is the possibility of interference and thus of the end state not being reached. The only time in which this is not the case is if the start- and the end-state are exactly identical and there is a duration of zero. In this case we return to tense and, as we have seen, tense requires aspect.⁶⁸

As such, we cannot resolve the problem by simply unifying the progressive and perfective. Yet, we could also deny the possibility of interference. If this was the case, then any progressive movement would have to result in a corresponding perfective movement. The temporal unity that movement forms provide to a substance would be shaped by a law that extends universally.⁶⁹ We would only think that there was a possibility of interference because we did not yet properly understand the laws of the universe.⁷⁰ So, how could we come to understand such a law? One proposal could be that we extend over what we have seen. Wood burns. Every time wood is in the proper situation it will start to burn as we have seen. Yet, this cannot suffice. Such a definition would reduce the law inherent to the movement to manifestations of that movement form. Nothing universal can be learned in such a way because we needed the very law in order to understand the manifestations of the movement form.⁷¹ We would already need to know what the movements are before we can generalize over them, but they are only the movements that they are due to the generality. The paradox resurfaces. Moreover, such generalization would only tell us that there *was* no interference, not that there could not be interference.⁷² If there is a possibility of the movement being broken off, then the law does not suffice. Thus, Rödl introduces a different kind of law that holds *in general*.⁷³ That something happens in general does not mean that it happens always; it happens when there is no interference. This is the type of generality that we want if we are to understand aspect. However, as we have seen, it cannot be reduced to either tense or aspect. Moreover, generality cannot reside at any given time because it might not occur for any particular substance; it holds *time-generally*.⁷⁴

Thus, Rödl introduces another form of thought: *generic thought*.⁷⁵ Generic thought is not just time-general it is also substance-general: if wood burns, then it is not just this wood that burns.⁷⁶ It is all

⁶⁷ Rödl, 174.

⁶⁸ I take this irreducibility and impossibility of unstructured parts of the system to be the core of Rödl’s argument on this problem. The argument extends without change when we try to reduce the universality of a movement to another state, whether that state is a desire, expectation or otherwise does not matter. Rödl, 175–80.

⁶⁹ I do not say “generally” here, as this term is used to describe another type of law by Rödl which plays a key role in *generic thought*. I will return to an exceptionless power in section 1.3.

⁷⁰ Indeed, such a view is sometimes held by physicists: there are no interference everything moves necessarily according to the laws of nature.

⁷¹ Rödl rightly remarks that such a view would require some form of induction, but induction can never go beyond the forms of predication that are present. It remains particular and does not provide the proper universal law. “Any finite number of temporal statements leaves open whether the corresponding time-general statement is true or false. Therefore we make no progress by enlarging the number; the distance between the finite and the infinite always remains infinite.” Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 189, 202.

⁷² I will return to the case in which there are no externalities, either to the movement form or the substance form, which can interfere in section 1.3. Rödl, 196–97.

⁷³ Rödl, 180–81.

⁷⁴ Rödl, 187.

⁷⁵ Rödl, 182.

⁷⁶ Rödl, 187.

wood that burns in general. The capacity to burn is part of what makes wood wood. It is independent of the particular substance but determines what happens to types of substances in general.⁷⁷ In other words, we do not predicate movements forms of substances; we predicate them of *substance forms*.⁷⁸ It is this unity of substance form and movement form that provides aspect with its law. “Wood burns to ash.” If we understand this generic thought, then we can understand the progressive aspect: wood is burning to ash, even if there is an interference that keeps it from burning up fully, because that is *what wood does*. With generic thoughts we can give explanations: why did my chair burn down?⁷⁹ It was made of wood and wood burns. Such an explanation cannot be reduced to mere particulars as they would just provide us with a list of instances of when some object burned down.⁸⁰ Yet, as we have seen without a principle of universality that is present in the law of substance form there is no way to connect movements in different substances to each other. There would be no such thing as burning or wood. The substance form of wood connects substances and shows why substances of these types burn. Movement forms can be manifested by substances of different substance forms. Yet, it is substance form that determines *how* movement forms manifest in the substances that are characterized by a substance form.⁸¹ Substance form is thus the general principle or ground of the movement forms and thus forms the temporal unity of the substance.⁸²

We are now finally in a position to see how Rödl’s system of temporal thought comes together. Particular states can be connected by means of a substance. A substance connects states through movement forms. Movement forms have a unity which can extend beyond specific times (and thus connect them) because it has a universality that is grounded by the timeless substance form. One might, lastly, wonder how a substance form can be attached to a substance. Indeed, if we can say of a substance that it falls under a substance form then it is temporally unified, but this seems to require an extra type of thought that states “S is an N.” However, as Rödl explains, such a “form thought” implies that there could be a substance which then has to be brought under a specific type of substance form.⁸³ Yet, a substance can only exist as a substance if it is temporally unified by a substance form.⁸⁴ We should not consider a substance as aside from a substance form. A substance

⁷⁷ As Rödl makes clear, we should not confuse generality with a notion that it holds in every situation; this would again reduce generality to tense. Rödl, 192–93.

⁷⁸ Rödl, 194.

⁷⁹ Haase shows that the interrelation between an artifact and its material is non-trivial. For an example, a chair and its being wood are not the same. Wood, as a substance form, is a stuff. A chair, on the other hand, is not stuff because it is an artifact. An artifact has internal unity because it is produced by a mode of being that has the capacity to impart discrete unity. Although I will not be able to discuss this in this text, it is exactly the possibility of externally imposing purpose that is characteristic to the self-conscious. Self-conscious entities make artifacts in order to change their capacities as self-conscious entities. Matthias Haase, ‘The Social Nature of Thinking’ (2012).

⁸⁰ Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 199–200.

⁸¹ Rödl summarizes the system succinctly: “A substance form is the principle of the laws of movement of substances of this form. This means that it is the principle of temporal unity of those substances. Something is apprehended as a substance if it figures as subject in progressive thoughts. The subject of such thoughts remains the same through changing states, and that requires that a law connect these states. A moving substance falls under laws of movement, and it does so, in the fundamental case, not as a particular distinct from other particulars, but as an instance of its form.” Rödl, 200.

⁸² For Rödl, this means that substance form is similar to Aristotelian substance as the focus of being: “A substance form is the ground of the movement forms predicated of it time-generally; it is the ground of the movements of substances of this form; and it is the ground of these substances. A substance form *is prôtê ousia*.” Rödl, 201.

⁸³ Rödl, 205.

⁸⁴ Rödl, 206.

form, however, needs to depend on intuition.⁸⁵ The dual dependence can be resolved once we realize that the particular substance and the universal substance form are two sides of the same coin: intuition and intellect.⁸⁶ As Rödl states: “We cannot assert anything of a substance without bringing it under a form. The structure of temporal, empirical thought is irreducibly three-part: substance-form-determination, *S, this N, is F (is doing A)* or *This N is F (is doing A)*.” Here it should be emphasized, however, that this does not mean that the forms of thoughts are reducible to each other. If thought exists, it exists through these different forms. The dialectic that Rödl has introduced means to show the inherent interdependence of these mutually irreducible, different forms of thought. In the next section I will make an analysis of Rödl’s account of the unity and difference of thought and show that it is exactly the discrepancy between these poles which is difficult to fathom.

1.3 Externality

We now have a system of temporal thought. Moreover, we have an analysis that is supposed to fully describe thought and being. We found that thought requires an object and that thought needs to be situated. Moreover, thought comes in three forms: *tense*, *aspect* and *generic thoughts*. These thoughts unify the categories of *state*, *substance*, *movement form* and *substance form*. All three forms of thought are also supposed to be connected: tensed and aspectual thoughts are both determinations of a substance. Aspect and generic thoughts are both characterized by a relation to movement forms. Generic and tensed thoughts come together once we realize that a substance is only a substance in as far as it is a substance form, whereas a substance form is only part of thought in as far as it can be perceived as a substance. The different forms of thought are unified in this system, but also necessarily distinct. In this section I will mount a critique of Rödl’s system of temporal thought that will revolve around three main problematic relations:

1. The relation between state and movement form.
2. The relation between a substance and a different substance.
3. The relation between the substance and the substance form.

As it will turn out the problem in all three of these is that either they become immediately unified, which is problematic, or they remain utterly external to each other, which is equally problematic. What Rödl will require is, as we will see, a more developed view of *externality*. Yet, before we can get to externality let us first develop these three relations and show why they are problematic.

If we want to understand why 1. is problematic, we first need to have clear what happens when a movement form determines a substance. A movement form, as we know, is characterized by a change from some state to another. It has a generality that extends beyond certain times. This extension includes the now if the movement form is unified with the substance as a present-progressive. For there to be a certain aspectual thought (i.e. S is doing A) we need to know what movement form is determining the substance (i.e. *what* A is S doing?). The easiest answer seems to be that we *perceive* the type of movement form the substance instantiates. Even if the movement

⁸⁵ This needs to be the case or thought would again be derived purely from innate universal knowledge. Such a thinker would be an infinite thinker who does not essentially rely on the intuitions of an external object. Rödl states: “The forms of the finite intellect form a system because they spring from a principle, which is the relation of thought to intuition and thus to time.” The principle cannot be substance form alone, but ultimately needs to be the unity between a substance and its form. Rödl, 182.

⁸⁶ Rödl, 208.

has only barely started, the continuous and open nature of movement (as we have seen in the previous section) requires that there has always already been some change. If there has been some change in the states of the substance, then we can tell with which movement form of the substance form this change coheres. Yet, the very nature of aspectual thought prohibits this. As we have seen, we can only understand a movement (and thus corresponding unity of trans-temporal substance) if it is characterized by a movement form that is contained by the substance form. For example, if I was in the living room and was “going to the kitchen” before my bowels interfered and made me go to the bathroom, then there was still, in that interference, a movement from the living room to the bathroom. That means I, being a certain substance form, had the movement form of going from the living room to the bathroom.⁸⁷ Let us say that I have currently neither gone to the kitchen nor the bathroom. I am currently walking towards the hallway which leads to both the kitchen and the bathroom. In that case, the change that I can see is *underdetermined*.⁸⁸ There are two incommensurable movement forms that lead to different outcomes that can both be seen in my current change.

This problem occurs because there is no *necessary* relation between states that demarcate a movement form in the system as it is currently presented. Even a change between states that *has* occurred does not guarantee the outcome of the progressive movement *precisely because* there are other movements that cohere with the movement up until that point. The fact that a certain body of water is liquid means that it can remain a liquid, freeze or evaporate.⁸⁹ These movement forms are all contained by the substance form. Yet, for one of them to determine a certain substance means that the other two are not determining that substance. The liquid state of the water, by itself does not suffice, as there is no preferential relation between either a liquid state remaining a liquid state, turning into a solid state, or a gaseous state. Thus, there is no way to break the balance of underdetermination. Movement forms are supposed to connect states, but there is no way to understand how the determination of a substance will develop based on a state or smaller movement form.

This leads us to the problem of 2. As we have seen, the movement forms that determine a certain substance can be underdetermined. This underdetermination relies on the possibility of interference. As long as there is no interference, a movement form that determines a substance should be completed in the full movement. In other words, progressive thought that is not interfered with

⁸⁷ Rödl states the following: “A given frog may be doing something that frogs do not do, namely, when something interferes. Then it is not the frog’s form alone that explains why it is doing what it is doing; to explain what it is doing, we must refer to that which interferes.” This could be seen to be in conflict with my assumption that anything that substance does must be something that it *can* do if the movement form is able to unify the substance trans-temporally. Nonetheless, even if we assume that this is not the case, then the problems of 2. still stand because we need to be able to understand what an interference is. Rödl, 204.

⁸⁸ My use of the term “underdetermination” is roughly inspired by the usage of Duhem and Quine in which our evidence can be seen in different ways in light of different theories. Similarly, different movement forms give us different relations between states which allow us to interpret the role of those states in the movement differently and in mutually exclusive ways. Still, I use the term because it seems to suit what I try to do here, nothing hangs on the relation to Duhem and Quine. If this is unacceptable, then my use of “underdetermination” can be exchanged with “underdetermination*”. Kyle Stanford, ‘Underdetermination of Scientific Theory’, in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Winter 2017 (Metaphysics Research Lab, Stanford University, 2017), sec. 2.1, <https://plato.stanford.edu/archives/win2017/entries/scientific-underdetermination/>.

⁸⁹ Remaining in the same state also needs to be a possible movement form. Otherwise, we could not, for example, recognize a rock that does nothing to be the same rock at a later point in time.

should lead, by definition, to a corresponding perfective thought.⁹⁰ Yet, the perfective thoughts of underdetermined progressive thoughts are incommensurable. That means that, ultimately, one of the movements needs to have an interference that keeps it from reaching its perfective.

Thus, we need to be able to understand what an interference is. Let us start with the absolute basics. Whatever is interfering needs to be *different* from that in which it is interfering. As stated, the substance that is in movement will simply complete its movement. That is what substances do. If it does not complete its movement, then something kept it from completing that movement. That something cannot be the substance itself, because then the substance would keep itself from completing its movement.⁹¹ This cannot be the case because the substance *is what is doing* the movement. If the substance is the only thing that should determine which movement is completed from the underdetermined possibilities, then it has no way of breaking the balance: all of the possibilities are movement forms of the substance form of which the substance is a certain instance. Thus, whatever causes the interference by which one movement form is broken off and another one completed is external to the substance in which it causes the interference. What can this external thing be? Well, as we have seen, the only way in which something can be is if it is captured by the categories that Rödl has introduced. That which is external but interfering with a substance must, itself, be another substance.⁹² Now, whether an external substance is capable of interfering with a certain movement is, at least in part, determined by the substance form.⁹³ This makes sense: being underwater does not interfere with the mating of a horse in the same way that it does with that of a seahorse.⁹⁴ Yet, as we have seen, the substance alone is not enough. There needs to be an external substance that affects it. Understanding how an external substance can interfere with a substance's movement is, however, not trivial. In order to see why this is the case, it is important to understand that the affection that is achieved needs to be a *change*. If the substance that undergoes an interference does not change, then it is not affected. However, if it does change, then we need to be able to understand this change as a movement form that is predicated of the interfering substance's substance form. A substance is only a substance because it is unified trans-temporally by a movement form. A movement form can only exist if it is determined of a substance form. That means that a substance is only that substance in as far as it falls under the substance form which contains the movement form, that is in as far as any change of the substance is captured by its substance form. If there is a change in the substance, then the nature of this change needs to belong to the substance form. If the change is characterized by the substance form of the substance that is interfered with, then it is no interference. Merely a movement. If the change is captured by the substance form of the interfering substance, then the whole interaction "between the substances"

⁹⁰ I skip over the nuances of how we can say this of present-progressive thoughts. I think the line of the argument should be clear enough. If we assume that nothing will keep a movement from completing, then it will be completed. A point could be made that one of the movement forms *simply does not apply*. Yet, the question that we come upon is the same: why does that movement form not apply if it is the state of a substance that determines what movement form is instantiated? If only one movement form applies, then we need to show why the other movement turned out not to apply.

⁹¹ As we will see in the next chapter of this text, the case for self-interference becomes plausible once we consider the possibility of different *metaphysical levels*. Yet, at this point those levels have not been shown.

⁹² This does not mean that this other substance also needs to be another type of substance. Lions, for example, are more than capable of interfering with each other's mating rituals. Often a male lion will strive to drive off another male lion that passes the pride and tries mate with the females of the pride.

⁹³ Rödl states: "what decides whether something interferes is the substance form." Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 204.

⁹⁴ Of course, the specific movement form is also relevant. Even for a human being, swimming is not affected in the same way by being under water as singing is. Rödl, 181.

turns out to be governed by a single substance form. If this is the case, then there is no interaction: there is only a single substance that manifests a certain movement form. Interference is interaction. Interaction requires different substances. Unfortunately, Rödl's system, as it is developed in CT, cannot grasp the difference between substances that is necessary for interference.⁹⁵

One of the reasons why Rödl's system cannot resolve the issue of separated substances can be found in 3. Rödl's "form thoughts" create a direct unity between the substance and the substance form. Substances, unlike substance forms, are not timeless. A substance can come and cease to be. That means that a substance has temporal limits. Yet, how can we think of these limits? They cannot be states. "S is destroyed"⁹⁶ makes little sense: a state requires that there is a substance which it determines, but it is exactly the lack of a substance which we are trying to grasp. Similarly, it is problematic to discuss the transition as a change from not-being to being or being to not-being. We might want to say, "S came to be", whereby we describe the change that occurred when S became an actual instantiation of an N in terms of a movement form. Yet, once again we could wonder: what is the state that delimits the movement form? The answer is that there is no delimitation because there is not yet a being that can change. Change is something that happens in time. It cannot be attributed to the timeless substance form and it cannot be attributed to the non-existent substance. Thus, we find ourselves in a conundrum: we wanted to say that the substance was in as far as it manifested a substance form and that the substance form was thinkable in as far as it could manifest. On closer inspection, however, it turns out that the unification of substance and substance form leads us to lose both.

A defense of Rödl's views with regards to 3. could be made once we realize that generation is seldom if ever *ex nihilo*. Similarly, destruction seldom if ever means utter annihilation. For example, what we tend to mean when we say that water is "destroyed" once we run electricity through it, is that we end up with oxygen and hydrogen gas. If a child tells their parent that they made them a card, they do not mean that they conjured it into being. They mean that they put glue, ink and paper together. On this reading the temporal demarcation of a substance is characterized by other substances. Once the previous substance ceases to be the characteristic substance, the new substance has come to be. Once the substance turns into another substance it ceases to be. Such a reading is not without merit. Unfortunately, in the current system of thought it cannot hold. For a substance to turn into another substance, there needs to be a change. This change is what demarcates the difference between the substances. Yet, as we have seen when discussing 2. this means that there is a change between substances and that is problematic. If the change is a movement form that manifests in either of the substances, then this movement form needs to be contained in a substance form. If it is contained in

⁹⁵ In "Intentional Transaction", Rödl develops the idea of a dyadic "Relation" that contrasts a monadic "power". The latter roughly applies to what we see in CT: a substance form which can be thought because it unifies a single substance. The latter could perhaps give us some form of internal difference: perhaps we can use a dyad to understand interaction. Still, this could not seemingly resolve the problem of interference. They would still be governed by the same dyadic structure. Moreover, it seems unclear how the oppositionality within an (undeveloped) dyad can be prevented from falling into the problems of unity that I sketch in this section. Unfortunately, working out the details here would require more space than I have. If nothing else, I ask the reader to at least see the problems in CT itself and, subsequently, how my resolution in 1.4 helps resolve this. "Intentional Transaction" does make a thrilling case for how we should understand the interactions of concrete and potential *self-conscious* entities. For now, however, I assume that we have not yet reached such an understanding of self-conscious entities. Sebastian Rödl, 'Intentional Transaction', *Philosophical Explorations* 17, no. 3 (2014): 304–16.

⁹⁶ Perhaps "destroyed" is not the right way of putting this as it implies some sort of perfective. In this case the alternative state would be something akin to "is not". The not-being of the substance is the relevant (although untenable) determination.

a substance form, then the substance form needs to span the entire process, or the unity of the movement form would be lost. If the substance form spans the entire process of change, then there is no change of substance: there is merely a substance that manifests a movement form which maintains the unity of the substance. If, on the other hand, the new substance somehow “interferes” with the “existence” of the other, then they require some principle by which they can be kept apart so that one can be the external interference for the other.⁹⁷ Again, we return to the paradox: we need a principle by which we can keep substances apart in order for us to be able to say when one substance ends, and another begins. Yet, we cannot have such a principle without being able to say where one substance ends, and another begins. Thus, the relation between substance and substance form in the current system is insufficient. We require a different relation, one in which the timeless substance form inherently makes clear what the temporal boundaries of a substance are.

In all three problematic relations the essential problem is that of externality and unity. We could see in 1. that because there is no necessary internal relationship between the movement form and the state there is an underdetermination of the movement form. This problem becomes clearer once we realize that the end-state is utterly external (or *indifferent*) to the start-state because the movement form (i.e. the state’s change) is a distinct category from what is changed (i.e. the state).⁹⁸ The only way to resolve this is by unifying the start- and end-state, but, as we have seen, that spells the end of the movement. Similarly, in 2. we found that an interference requires an interaction, which means that there two substances that are mutually external. Either this leads the substances to be completely external, in which case they cannot affect each other and there is no interference possible (again, indifferent) or they share a movement form in which case they unify and the change that occurs is no interference. Lastly, we saw in 3. that the temporal limits of a substance require us to show how it relates to something that is external to that substance. Either this was nothing, which is external to being but cannot be captured by the system of thought that we currently have. Or it is another substance which relays the problems back to the problems of externality that we found in 2. Either way, it is clear that we require a developed account of externality if we are to tackle the deficiencies of Rödl’s system. As I will show in the next section, we need to reinterpret Rödl’s system through Hegel’s work in the *Wissenschaft der Logik*. There, Hegel develops the concept of the external. As we will see, we do not require a different system of temporality: tense, aspect and generic thoughts suffice for this purpose. However, we do require a different logical analysis of the beings that inhabit the temporal.

1.4 Objectivity

The development of the categories of thought allows us to understand how thought is *temporal*. Developing the temporality of thought shows us that we need to understand how the objects of thought can relate to an *external* without being unified with that external. Yet, as we have seen this is not an easy task. We need to understand how a determination that governs an object of thought can show the limits of that object. The determination of the object needs to show, on the one hand, how the object can relate to other, external, objects and, on the other, what it means for the substance to be differentiated from these other objects. The determination that limits the object

⁹⁷ I have worked out more possible permutations by which the defender of Rödl’s system could try to resolve the issues in more detail in another text. Robin Riemersma, ‘Mortal Thoughts’ (2018).

⁹⁸ Of course, I do not mean to imply that any state could lead to any state. There needs to be a connection in terms of movement form that connects them. “Green” does not lead to “frozen”. Yet, because a start-state can be the same for different end-states, given different movement forms, it is “indifferent” as to which end-state it ends up in.

should be determined of *this* object in a way that is different from other objects. Otherwise, their limits would be the same as the limits of the object which we tried to determine in the first place, and it becomes difficult to see how they remain external to each other. The problem of determining the externality of an object can thus seem difficult to resolve. And indeed, it is. That is, it is difficult to resolve *as long as we try to remain in the established logical form*. If we want to resolve it, then we need to expand the logical form of thought not just in terms of *temporality*, but in terms of *externality*.

Yet, we do not merely want to propose an addition to Rödl's account that can deal with the problems of externality which we have seen in the last section. We need to develop thoughts in a way that does not merely address the problems that we have seen, but rather shows that the logical form which it develops is *necessary*. That is, we need to develop the determination of externality *dialectically*.⁹⁹ A dialectical development of thought culminating in a development of externality is exactly what we find in Hegel's *Wissenschaft der Logik* (WL) and *Enzyklopädie der philosophischen Wissenschaften im Grundrisse* (E). Hegel, like Rödl, wishes to know what the forms of thought are. Hegel wishes to be without dogmatic assumptions in his development. That means that Hegel does not assume any prior understanding of thought at all. Hegel does not assume that we know what a form is or even what its relation to particularity is.¹⁰⁰ Hegel does not assume we know what negation is.¹⁰¹ Hegel does not even assume that we know what "nothing" is.¹⁰² He starts from the basic assumption of "being", where being is "the supreme and most general concept, which [...] includes anything susceptible, in any manner, of being thought."¹⁰³ That is, it is being or thought grasped in fullness immediately and without any form of differentiation. He then dialectically develops his logic from the category of being until it contains a variety of categories. I will not reproduce the full development here. Nor will I presume that the reading that I will give is exegetically fully correct - Hegel scholars have spent over 150 years discussing his works, and my concerns are in the end systematic. What I hope to do, then is to look into Hegel's works, see how he develops externality and apply this to our current predicament. In doing so, we can expand Rödl's categories and get closer to understanding death.

The link between Rödl and Hegel is built upon Hegel's view of objectivity. As we will see, the problems that are internal to the categories of Objectivity (*Objectivität*) in Hegel's logic are parallel to the problems that we find in Rödl's work.¹⁰⁴ Before we can see the parallel, however, we first need to

⁹⁹ To be clear, this is how I take the term "dialectic": it is a development of categories that evolves naturally by showing that a new category is inherently contained in another category. In this new category we find out that there is inherently another category contained and so on. The development is thus necessary and *could not be different*. Kisner holds a similar account: "To say that category A "develops into" category B means that category B is category A rendered fully explicit. But it is not a matter of adding characteristics or additional features to A in order to arrive at B, because the development of A at the same time shows its own unsustainability. This unsustainability lies ultimately in the fact that what a category shows itself to be—its own conceptual determinacy— can no longer be sufficiently accounted for in terms of the specific determinacy that belongs to that category." Wendell Kisner, 'The Category of Life, Mechanistic Reduction, and the Uniqueness of Biology', *Cosmos and History* 4, no. 1–2 (2008): 114–15.

¹⁰⁰ Kisner, 122–25.

¹⁰¹ Georg Wilhelm Friedrich Hegel, *Wissenschaft der Logik. Erster Band: Die Objektive Logik*, ed. Friedrich Hogemann and Walter Jaeschke, vol. 11, *Gesammelte Werke*, 1978, 75–78.

¹⁰² Hegel, 11:44.

¹⁰³ Petry takes this quote from Eisler, I take it from him. Georg Wilhelm Friedrich Hegel and Michael John Petry, *Philosophy of Nature*, vol. 1 (Allen & Unwin, 1970), 147.

¹⁰⁴ I use the term "objectivity" in a number of places in this text. I will only capitalize it if I specifically talk about "the categories of Objectivity", following my earlier use of, for example, "the categories of the Notion".

have some insight in Hegel's WL. What we call WL consists of three books: the first discusses the categories of Being (*das Seyn*), the second the categories of Essence (*das Wesen*), and the third the categories of the Notion (*der Begriff*). I will not go into details with regards to the first two books because I am interested in the categories of the Notion. Objectivity is only developed in the third book. What is important about the first two books is their relation to *mediation*. The categories of Being, which characterize the first book, are *immediate*.¹⁰⁵ Categories of this type are supposed to capture their object completely without reference to anything else. Yet, for every of these categories, Hegel shows that they are dependent on another category that is already contained within the category once we explicate it. If we take this to mean that the new category is somehow the "correct" one and the old one should be rejected, then we make no progress as the explication of categories in this way knows no end. Instead, we ought to grasp the interdependence of categories. The new category "grounds" the category in which it was contained. An interdependence of this kind characterizes the categories of Essence, which are the topic of the second book. Categories of Essence cannot *immediately* be their own ground.¹⁰⁶ Thus, they all find their ground in another category: they are *mediated*.¹⁰⁷ Once we explicate the categories of Essence, however, we find that mediation (i.e. the grounding in another) turns out to be equally untenable.¹⁰⁸ Hegel shows that the principle of mediation is itself mediated by the immediate. Mediation requires an immediate which it can mediate. This means that the immediate is the ground of mediation.¹⁰⁹ It is how the immediate determines *itself*. Thus, we come to a type of categories that do not merely stand on their own in grasping the world, nor are they fully determined by another category.¹¹⁰ Thus, we come to categories that *self-determining*. It is this self-determining nature of categories that is characteristic of categories of the Notion.

Now we have come to the third book. Yet, we cannot immediately start with objectivity. We first need to see how Hegel develops the categories that lead up to his view of the object before we can appreciate what the problems of the object are. Let us start with an easy question: what does it mean that the categories of the Notion are "self-determining"? Hegel provides us with an enlightening example:

"Betrachten wir z. B. die Sitten des spartanischen Volkes als die Wirkung seiner Verfassung und so umgekehrt diese als die Wirkung seiner Sitten, so mag diese Betrachtung immerhin richtig sein, allein diese Auffassung gewährt um deswillen keine letzte Befriedigung, weil durch dieselbe in der Tat weder die Verfassung noch die Sitten dieses Volkes begriffen

¹⁰⁵ See also Hegel's definition of being as a category: "Seyn, reines Seyn, - ohne alle weitere Bestimmung. In seiner unbestimmten Unmittelbarkeit ist es nur sich selbst gleich, und auch nicht ungleich gegen anderes, hat keine Verschiedenheit innerhalb seiner, noch nach Aussen." As we can see, Hegel makes an effort to start without assumptions. Being is that category about which nothing has been shown. Other categories of Being are further determined, but remain immediate. Hegel, *WL I*, 11:43.

¹⁰⁶ Kisner, 'The Category of Life, Mechanistic Reduction, and the Uniqueness of Biology', 122.

¹⁰⁷ This includes Essence itself. The ground of Essence is the immediacy of Being: "Seyn und Wesen verhalten sich auf diese Weise wieder als Andre überhaupt zu einander, denn jedes hat ein Seyn, eine Unmittelbarkeit, die gegen einander gleichültig sind, und stehen diesem Seyn nach in gleichem Werthe." This does not imply that they are fully the same, of course, Being determines Essence because it gets sublated (*Aufgehoben*) in the dialectic. Making this distinction allows Hegel once again drive forward the dialectic. Hegel, *WL I*, 11:245.

¹⁰⁸ Kisner, 'The Category of Life, Mechanistic Reduction, and the Uniqueness of Biology', 123.

¹⁰⁹ Justus Hartnack, *Hegels Logik* (Peter Lang, 1995), 80–81.

¹¹⁰ The end of the second book also contains a discussion on substance (*Substanz*). This substance is not immediately related to Rödl's substance or substance form: it is better understood as that what characterizes accidents as accidents. See Hartnack for a useful commentary. Hegel, *WL I*, 11:394–96; Hartnack, *Hegels Logik*, 75–77.

werden, welches nur dadurch geschieht, daß jene beiden und ebenso alle die übrigen besonderen Seiten, welche das Leben und die Geschichte des spartanischen Volkes zeigen, als in diesem Begriff begründet erkannt werden."¹¹¹

We can only understand the constitution of the Spartans if we understand their habits, and we only understand their habits if we understand their constitution. Yet, we can make sense of neither unless we also have some understanding of the Spartans which underlies our understanding of both the habits and the constitution. We require an understanding of "Spartanhood". It is this grounding understanding that determines itself by means of the actual habits and constitution of the Spartans and without which we could not understand the habits and constitution of the Spartans. Reversely, we understand Spartanhood through the interaction between the habits and the constitution of the Spartans. Spartanhood shows itself through the determination of the habits and constitution, and thus determines itself through them. It is this form of self-determination that characterizes the Notion. As Hegel states:

"Es ist verkehrt, anzunehmen, erst seien die Gegenstände, welche den Inhalt unserer Vorstellungen bilden, und dann hinterdrein komme unsere subjektive Tätigkeit, welche durch die vorher erwähnte Operation des Abstrahierens und des Zusammenfassens des den Gegenständen Gemeinschaftlichen die Begriffe derselben bilde. Der Begriff ist vielmehr das wahrhaft Erste, und die Dinge sind das, was sie sind, durch die Tätigkeit des ihnen innewohnenden und in ihnen sich offenbarenden Begriffs."¹¹²

As should be clear, Hegel does not just assume that this is how self-determination works. He has to show this nature *dialectically*.¹¹³ In developing the Notion, Hegel makes use of the categories of universality (*Allgemeinheit*), particularity (*Besonderheit*), and individuality (*Einzelheit*).¹¹⁴ So, what does it mean to be determined? Determination, for Hegel, is limitation. This limitation should be understood as negativity in the Spinozistic sense: something *is* because it is limited by something.¹¹⁵ Because the Notion determines itself it is without external limitations. In this sense, it is a return to

¹¹¹ Please take note that this example is not from WL but from E. Georg Wilhelm Friedrich Hegel, *Enzyklopädie der philosophischen Wissenschaften im Grundrisse und andere Schriften aus der Heidelberger Zeit*, ed. Wolfgang Bonsiepen and Hans-Christian Lucas, vol. 20 (Düsseldorf: Felix Meiner, 1992), §156.

¹¹² Hegel, 20:§163.

¹¹³ It can be helpful in what follows to discern a movement that Hegel's dialectics often take. Hegel will start with some sort of unity that is, in a way, immediate, abstract and undifferentiated. This first immediate unity will turn out to be unable to contain its own determination as immediate while sustaining its place in the dialectic. This will lead the unity to be subject to an internal split (*Trennung*, *Besonderung* and *Entzweiung* are variations on different levels) which mediates the immediate and determines it. The mediating split will then turn out to be mediated by the immediate and, as such, only be a split in so far as it is governed by the immediate. The whole development will be a type of self-determination. In this self-determination, the original unity will share its original features but now with an internal richness due to its self-determination that allows it to be "sublated" (*Aufheben*) and reach a higher level of understanding. In this higher level of understanding its unity will, generally, again be undetermined and immediate and so the cycle continues. The movement from an immediate, abstract unity to a mediated split to a self-mediated, rich, unity is one that seems to occur at different levels in WL. It should not be taken as a fixed methodology (the thesis, anti-thesis and synthesis movement is often wrongly attributed to Hegel in such a way), but changes as the categories change. I merely point out a rough outline of this movement as an aid in understanding Hegel's development of the Notion.

¹¹⁴ Georg Wilhelm Friedrich Hegel, *Wissenschaft der Logik. Zweiter Band: Die Subjektive Logik*, ed. Friedrich Hogemann and Walter Jaeschke, vol. 12, *Gesammelte Werke*, 1981, 32.

¹¹⁵ I take this analysis from Hartnack. Earlier in WL, Hegel explicitly discusses this Spinozistic notion of determination and makes a detailed analysis of it. Hartnack, *Hegels Logik*, 84; Hegel, *WL II*, 12:76–78.

the immediacy of Being.¹¹⁶ In other words, it has become an immediate unity and the first step in the process of self-determination: an undetermined unity. This is characteristic of universality. Universality is what allows determination to take place. Yet, allowing for determination is not yet a determination. The Notion does not yet determine itself through the determining structure (i.e. the universal) alone. A determining structure requires both something that determines and something that is determined. It is this internal separation that allows us to understand how universality comes to particularity. Particularity is how universality shows itself as universality (e.g. different aspects of Spartan life is the totality through which Spartanhood shows itself as Spartanhood).¹¹⁷ Why? Because, as stated, for universality to be the immanent ground of the self-determination, it also needs something that it determines. In this case, universality tries to determine universality. It therefore splits up as universality that determines the process and as universality that is determined by this process. It is this splitting up of universality that characterizes particularity. Particularity thus forms the second step of the self-mediation. It is negative in as far as it creates this internal separation. Particularity is the totality of determinations. Totality, for Hegel, is that structure that shows some realm in which the parts are kept apart, but shown in their proper relation (for example, the dialectic is a totality of moments). It is in this sense that both universality and particularity are shown as determinations: they limit one another. In this sense, both universality and particularity fall under particularity.¹¹⁸ Yet, they fall under particularity in light of the determining universal that unifies the determinations as determinations. Thus, both universality and particularity come to be shown as having a role in self-determination. The Notion is characterized by both universality and particularity.¹¹⁹ Yet, in this return from particularity to universality, we find that particularity has given rise to another category: individuality. Individuality is how universality has determined itself, the determination of the determining.¹²⁰ Where particularity was the totality of different determinations, individuality is what characterizes these determinations. It is, in this sense, the negativity of negativity: where particularity was the limitation of universality, individuality is the limitation to particularity. It is in light of the individuals that we can actually speak of universality determining something. It is only because universality determines individuals that there is the negative totality by which we can speak of self-determination.¹²¹ To extend the Spartan metaphor: Spartanhood (universality) determines itself through the interrelation of constitution and habit (individuals). It is in their difference (particularity) that we can speak of self-determining. Yet, constitution and habit need to be actually distinct determinations that we can understand through Spartanhood if we are to understand particularity. Thus, we can understand their interrelation. Universality, particularity and individuality are themselves how the Notion determines itself. The Notion is the universality that determines itself by means of the individual categories (universality,

¹¹⁶ Hegel, *WL II*, 12:33.

¹¹⁷ Hegel, 12:37.

¹¹⁸ Hegel claims that this is the full determination of particularity. Relations between particularity and universality which we can see in Nature might cohere only poorly with the Notion. This is due to “die Ohnmacht der Natur, die Strenge des Begriffs nicht festhalten und darstellen zu können”. It is exactly this conflict between the concrete object and the Notion that we will see reflected in the Idea. Hegel, 12:38–39.

¹¹⁹ Even more telling of the relation between Hegel and Rödl is Hegel’s remarks on intuition. Hegel states that this determination of particularity forms a “totality” which can be characteristic of intuition. He warns us, however, that intuition in itself is not enough to teach us about a priori structures. What we need is an “intellectual intuition” that does not find its structure in pure sensory perception, but that understands the “objective” form of the totality. This, of course, reminds of Rödl’s project, who strives to understand how the structure of intuition can grant us thought at all. Hegel, 12:41–42.

¹²⁰ Hegel, 12:49.

¹²¹ Hegel, 12:49–52.

particularity and individuality) that form a particular totality. That means that universality, individuality and particularity thus stand in a Notion-type relationship to each other.¹²²

At this point, the categories of universality, particularity and individuality are united in the Notion. Yet, Hegel still has to show how they are fundamentally distinct while being related. Developing the dialectic will thus require that we show how the categories can be differentiated. We come to the moment of negativity or mediation. Developing their differences is what Hegel does in the section on *judgment (Urtheil)*.¹²³ It is in judgment that the categories get differentiated and related in a totality. These judgments are then again united in his chapter on the *sylllogism*. Syllogisms show how the categories can mediate between each other and thus once again be united in a richer unity. It is this self-mediation that concludes this part of the dialectic and shows the Notion to be self-determining. Syllogisms, which we can find in Aristotelian logic, are thus not meant as a “calculus”, but as a way of unifying the relationships between universality, particularity and individuality.¹²⁴ In the last syllogism, the disjunctive syllogism, Hegel finds a relation between universality, particularity and individuality, in which particularity becomes united with universality and individuality in such a way that they form an identity. Particularity, or the distinguishing negativity, becomes part of the universal that necessarily distinguishes itself into individual beings. This, Hegel states, is the immediate relation between a regulative form and its instantiated being (*Daseyn*). Yet, because they are no longer mediated by particularity, they have absorbed particularity, they are shown to be necessarily united: “die Form is nicht die äusserliche negative Einheit gegen ein gleichgültiges Daseyn, sondern identisch mit jenem gediegenen Inhalte.”¹²⁵ Individuality only exists in as far as it exhibits universality. Likewise, universality only exists in as far as it manifests in individuals. This includes the Notion itself. It only has meaning in as far as it is manifested by real individuals. Those real individuals are only real, however, in as far as they self-determine themselves in accord with the Notion. Up until this point the Notion was, in Hegel’s terms, “subjective”. We described the form of thought in relation to formal categories, but we did not yet know whether this structure was the true structure of the *concrete* beings in the world. Yet, at this point we have shown that these formal categories are immediately unified with concrete beings.¹²⁶ What we develop is no longer the categories of self-determining thinkers that are applied to the world but is a development from the actual concrete beings in the world themselves.¹²⁷ We have now come to Objectivity.¹²⁸

¹²² Hartnack, *Hegels Logik*, 84–84.

¹²³ Hegel likely uses the faux-etymological meaning of the word “*Urtheil*” here that was proposed by Friedrich Hölderlin in Hölderlin’s short text “*Urtheil und Seyn*”. Hölderlin criticizes the subjective subject-object relation of Fichte. Fichte claimed that the positing of the I by the I (I=I) is the absolute ground. Hölderlin denies this: there first has to be an original separation (*Ur-theilung*) of subject and object. We find their relation in the logical copula that unites subject and object while showing the things which it unites as separate. Similarly, Hegel focuses on the logical copula that unites the categories of universality, particularity and individuality and shows their respective interdependence and difference. Friedrich Hölderlin, ‘*Urtheil und Seyn*’, *Sämtliche Werke* 6 (1795): 216–17.

¹²⁴ Perhaps Ivan Ilyich would have had more luck if he had understood that Kiesewetter’s logic was only a step towards an explication of death. We can find it as the first syllogism in WL. Hegel, *WL II*, 12:48, 95.

¹²⁵ Hegel, 12:125.

¹²⁶ Robert Stern specifically analyzes these passages in light of the necessary relation between substance and substance kind that is very close to Rödl’s requirement of a substance form for a substance. Robert Stern, *Hegel, Kant and the Structure of the Object*, vol. 66 (Routledge, 1990), 73–76.

¹²⁷ An example of such a form of application can be seen in the Kantian *Schema*.

¹²⁸ This step is quite difficult to understand and I cannot do it justice here. The interested reader should turn to Lakebrinks explication. The concreteness of the the object is already preceded by “*Seyn*”, “*Existenz*” and “*Wirklichkeit*”. Yet, all of these do not happen in the realm of the self-determining Notion. The object, in the sense of the Notion, determines *itself* as concrete and gives true meaning to these earlier moments. See

In Objectivity, we have come to the objects of thought in the way that Rödl discusses them. Objectivity is governed by what he describes as *form thoughts*.¹²⁹ It is the unity of the concrete actual substance, that confronts us thinkers in our perceptions, and the substance forms, that transcend any individual situation. We do not merely want to *apply* our logic to concrete objects: the concreteness of the objects needs to be an inherent part of our logic.¹³⁰ Substances and substance forms are not separated, they are inherently united in describing objects of thought. Universals require individuals, individuals require universals. Understanding Rödl's three temporal forms of thoughts as a unified system is characterized by this unity. As we will see, this leads to problems that are extremely similar to the problems with the first form of Objectivity that Hegel discusses.

This first form of Objectivity is *mechanism*.¹³¹ Mechanism is the immediate form of objectivity. Mechanism is characterized by those beings that are determined by "indifferent externality".¹³² What does this mean? The mechanical object only determines itself as actual in as far as there is an identity between universality, particularity and individuality.¹³³ Yet, it is their disunity, which has gone through the dialectic of the subjective Notion, which shows these categories as self-mediated. The determination that shows the mechanical object to be a self-subsistent actual being-in-itself is thus *external* to the object. Here we come upon a problem. We have a unity of categories, which is the requirement for things to actually exist at all. In so far as we can think of actual objects, this is what they are. They fully determine themselves as existing and, as far as they exist, they are determined by this immediate relation between the universal, the particularity and the individual. An external determination of any kind has no place in this self-determination. The mechanical object is *indifferent* to it. Yet, in this full determination of itself, the moments that characterized it (universality, particularity and individuality) have become undifferentiable: nothing is keeping them apart. If we merely take them immediately apart, then these categories need to exist as actual and independent: they would need to exist as objects. Yet, as we have seen, objects are indifferent to their external and thus they cannot be determined by one another in such a way that they can be united.

What we require is, once again, a unifying separation. Hegel writes:

especially Lakebrink p. 181 for a further analysis on this topic. Bernhard Lakebrink, *Kommentar zu Hegels 'Logik' in seiner 'Enzyklopädie' von 1830*, Alber-Broschur Philosophie. (Freiburg: Alber, 1985), 175–88.

¹²⁹ Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 205.

¹³⁰ This is the problem that Rödl also established when discussing Frege. A parallel to Rödl's thought can be found in Hegel: "Wenn jedoch wie gewöhnlich geschieht, zugegeben wird, daß das Logische als das Formale, die Form für das Erkennen jedes bestimmten Inhalts ausmache, so müßte wenigstens jenes Verhältniß [the relation between the formal Notion and the concrete world, RR] zugestanden werden, wenn nicht überhaupt eben bey dem Gegensatze des Begriffes gegen die Objectivität, bey dem unwahren Begriffe und einer eben so unwahren Realität, als einem letzten stehen geblieben wird." As Hegel states, a logic that does not fundamentally incorporate its concrete object leads to skepticism about the reality of the world. Hegel, *WL II*, 12:129.

¹³¹ To understand the implications of the term "mechanism" we need to understand that Hegel opted to critique Newton's theory of force. In Hegel's view, determination of objects was always external to the object for Descartes and Newton. Things remain the same as long as there is no (external) interference (i.e. think of Newton's First Law of Motion). For Hegel, this notion of force was "dead", and he opted to develop a more Aristotelian account of forces that, as we will see, culminates in the category of *life*. Kisner, 'The Category of Life, Mechanistic Reduction, and the Uniqueness of Biology', 128–35; Alfredo Ferrarin, *Hegel and Aristotle* (Cambridge University Press, 2005), 203–9.

¹³² Kisner, 'The Category of Life, Mechanistic Reduction, and the Uniqueness of Biology', 135.

¹³³ Lakebrink, *Kommentar zu Hegels 'Logik' in seiner 'Enzyklopädie' von 1830*, 191.

“die Objectivität ist noch nicht als Urtheil gesetzt. Insofern sie den Begriff immanent in sich hat, so ist der Unterschied desselben an ihr vorhanden; aber um der objectiven Totalität willen sind die Unterschiedenen vollständige und selbständige Objecte, die sich daher auch in ihrer Beziehung nur als selbständige zu einander verhalten, und sich in jeder Verbindung äusserlich bleiben.”¹³⁴

Due to its *indifference*, every true determination of the independent mechanical object, even its determination as independent of externalities, is external to it. Mechanical objects are only independent in as far as they externalize their independence.¹³⁵ Yet, by externalizing their determination of independence they become dependent. Mechanical objects show themselves as dependent in as far as they are independent, and independent in as far as they are dependent. Moreover, objects are only determined as objects in as far as they are *undetermined* by an external. Yet, the determination as an object can only be external, which needs to be determined itself. We are thus facing a problem. Objects need a determination, but as far as something can determine an object, that something needs to be an object.¹³⁶ Objects are only objects in as far as they are undetermined by an external.¹³⁷ Yet, different determinations are what show the latter object as distinct from the first. The latter object thus suffers from the same problems as the first. It is just as undetermined and self-subsistent. Hegel writes:

“Indem nun die Bestimmtheit eines Objects in einem andern liegt, so ist keine bestimmte Verschiedenheit zwischen ihnen vorhanden; die Bestimmtheit ist nur doppelt, einmal an dem einen, dann an dem andern Object, ein schlechthin nur identische, und die Erklärung oder das Begreifen insofern tautologisch [sic].”¹³⁸

We should recognize this as the essence of the problems that we saw in section 1.3: due to the indifference of state and movement form, they remain underdetermined. Yet, this is a problem because the state ought to determine the movement form and the movement form the new state. Their determinations are external to each other. When looking at interference we see that the possibility of interference is a requirement for an object of thought. At the same time, this determination of interference can only exist by means of an indifferent self-subsistent object. Lastly, due to the unity of the substance form and the substance there is no way of stating what the limits of a substance are. Whatever is beyond the limits of the substance is, by definition, external to it. Because the substance is only the substance in as far as it is immediately united with the (at least temporally) unlimited, the only way for the substance to “extend” beyond its limits is by unifying it. Otherwise, its determination remains external to it and this dependence on an external is the same for the substance that is supposed to be its external. The solutions to the deficiencies of Rödl’s system, as it is presented in CT, are thus the solutions that Hegel will give to the deficiencies of mechanism.

¹³⁴ Hegel, *WL II*, 12:133.

¹³⁵ André Lécrivain, ‘Actuality and Objectivity in Hegel’s Philosophy’, *Philosophical Forum* 31, no. 3 & 4 (2000): 341.

¹³⁶ “Indem also das Object in seiner Bestimmtheit, eben so gleichgültig gegen sie ist, weist es durch sich selbst für sein Bestimmteyn ausser sich hinaus, wieder zu Objecten, denen es aber auf gleiche Weise gleichgültig ist, bestimmend zu seyn.” Hegel, *WL II*, 12:135.

¹³⁷ Hegel likens the objects Leibnizian monads. Hartnack explains that this is because every monad is uninfluenceable by another monad. It has not possibility of external relation. Hegel’s account will prove to be more complex. Hegel, 12:134; Hartnack, *Hegels Logik*, 97.

¹³⁸ Hegel, *WL II*, 12:135.

Hegel sees the development of the problems of mechanism in terms of externality as a result. It is the pushing of the determinations of externality of mechanical objects to each other that defines them.¹³⁹ Here, we find an interaction that Hegel calls “the mechanical process” which he likens to the pushing (*abstossen*) of classical mechanics.¹⁴⁰ This interaction reintroduces the moments of the Notion. The objects are connected universally by their “communication” (*Mittheilung*) which consists of the objects externalizing their determination to each other.¹⁴¹ The objects are also separated by communication, or “particularized”, because their unity requires the objects to externalize the other. In this sense, they are individual objects. Yet, the problem remains. The objects are only independent in as far as they are dependent on this structure of communication. But communication cannot be a determination of the object. As we have seen, the object cannot be determined, because determinations are external to it. This was what prompted the development of communication in the first place. At the same time, what makes the objects into actual individual objects is communication. In this sense, communication commits “violence” and overcomes the individuality of the object. It is the universal that determines the object, but in determining the object it also determines it as losing its independent individuality. It thus describes the nature of *destruction*. As Hegel states, the universal nature of the individual mechanical object characterizes its “*Untergang*”.¹⁴² We can only understand the individuals in as far as we can understand their (causal) interaction. As an example, we might say that the electrical charge of the electron exists in as far as it affects other carriers of electrical charge. Trying to think of electrical charge in a purely distinct sense (i.e. electrical charge as apart from how this electrical charge affects interaction between charges) disallows us to understand them as individuals. Individuality requires something beyond the indifferent individuals.

This means that we ought to establish the locus of the universal nature of causal interactions (the *Centrum*). He first proposes that we can grasp the universal nature of interactions by making it into an individual itself. Hegel uses the example of the sun, which is the center of the solar system, but not one of the planets which it governs.¹⁴³ Another example is that of the government which is the individual which embodies the different needs of its citizens. The government, in turn, consists of the citizens that have their own needs. These needs shape their interactions and the government. Because the government is different from the single citizens, however, what we find as a government is a different system than what we would want as individuals. Yet, it is our trying to satisfy our needs that leads to the government.¹⁴⁴ This is, thus, an interrelation that is not a direct unity between the

¹³⁹ One might, on a lower level, think of the “this” that is “not that” for which the “that” is a “this” that has a “not that” in the original “this” as described at the start of Hegel’s *Phänomenologie des Geistes*. The difference lies, of course, in the independence of the object: the mediated immediacy instead of the mere immediacy.

¹⁴⁰ I mean classical here in the sense of Newtonian elastic collisions. Considering that we are working on mechanism and that this is a reworking of Newton’s insights in the dialectic, this does not seem unfounded. Interestingly, Hegel shows what it means for something to be an aggregate: it is the unity in which mechanical objects are shown to be one by no longer differentiating between themselves but pushing their joint externality outwards. Hegel, *WL II*, 12:137.

¹⁴¹ The English translation strongly lacks the implied sense of the word “*Mittheilung*”, which consists of “*Mit*”, which is “with” and “*Theilung*”, which is “separation”. Communication thus implies a separation that happens because that what is separated, in this case the objects, also share in something, in this case that what makes them objects, their externalizing. Hegel, 12:137–38.

¹⁴² What is important here is that Hegel explicitly states that living beings as mere stuff, that is unliving objects, have their deaths characterized by “*Zufälligkeit*”, their continuation or destruction relies on mere happenstance. As we will see, a proper understanding of living beings shows that death is a necessary part of their development. In this sense, it can already be seen that death is not mere destruction. Hegel, 12:141.

¹⁴³ Lakebrink, *Kommentar zu Hegels ‘Logik’ in seiner ‘Enzyklopädie’ von 1830*, 195.

¹⁴⁴ Here, Hegel shows that all three terms (the government, the citizen and the needs) can be the mediating factor between the other two. Of course, purely describing the government by means of mechanism is uncalled

governing principle and that which it governs. As it turns out, understanding the governing individual as different from (and indifferent to, in line with its mechanical nature) that which it governs is untenable: we need an interaction between the governing principle and that which it governs. This leads Hegel to the understanding that what is required is the totality, the proper relation between the governing principle of causality and the objects that become objects through the causality, which is *immanent*. This totality, Hegel writes, is characteristic of the *law* of mechanics.¹⁴⁵ We can think of Kepler's laws that we find in the movements of the planets around the sun. Alternatively, we could think of the laws that govern momentum in collision. We need interaction to understand objects, this interaction depends on what kind of objects they are. This interrelation is the law of mechanism. Yet, we can immediately see that in this way the "self-subsisting objects" are no longer merely independent. They determine each other by means of their interaction. It is the tension between the objects as being *opposed* to each other in a way that is *not indifferent* that is the true nature of mechanism. The alternative would just impose an external (and indifferent) law upon different objects, but this is not a true law but merely a "rule" (*Regel*) that does not need to hold. In other words, an indifferent disunity between a concrete being and its determination does not allow us to show that the determination is, itself, concrete and the actual determination of the objects that it is supposed to determine.¹⁴⁶ There remains a separation between the *subjective* Notion that we have developed and the *objective* Reality to which we try to apply it.

This brings Hegel to the category of *chemism*. The category of mechanism tried to determine the actuality of its objects by showing the form of the determination to be the same for all mechanical objects: a self-subsistent indifferent relation between the universal, particular and individual of single individuals. As it turns out, this cannot stand. We require a relation between objects that requires them to inherently acknowledge their differences. A relation that strives to, inherently, express the Notion by means of their concrete existence. Chemism characterizes its objects by the interdependent relationship between objects. Objects determine each other.¹⁴⁷ In this sense, Hegel states, the universality is inherently characterized by particularity in relation to its individuals. For example, if we want to understand acidity (a clear *chemical concept*) then we need to understand what an acid is. Yet, an acid is only an acid because there is a different thing that can oppose it: a base. Likewise, a base is only a base because of its relation to an acid. Acidity is understanding the interdependence of these poles. The chemical interaction between an acid and a base is different from that of a mechanical collision (think of the communication): the acid and the base's interaction does not occur because they are the same, but because they are different.¹⁴⁸ Externality is, in this

for, the government is a product of culture. Culture is only discussed on the level the self-conscious being. Hegel uses it, however, because it is a useful parallel. Hegel also goes into detail with regards to the government-citizen-desire relation in E. Hegel, *WL II*, 12:144–45; Hegel, *E*, 20:§198.

¹⁴⁵ Hegel, *WL II*, 12:145–46.

¹⁴⁶ We can interpret this part as a critique of Hume's problem of induction. Indeed, looking merely at singular occurrences does not allow us to say more than that there has so far been a coincidental streak of occurrences. Going beyond this requires us to find the laws of the subjectivity which extends beyond the indifferent object. We need to find the necessary extension. In fact, this is what Hegel explicitly seems to discuss in this section: "Das objective An und für-sich-seyn ergibt sich daher in seiner Totalität bestimmter als die negative Einheit des Centrums, welche sich in die subjective Individualität und die äusserliche Objectivität theilt, in dieser jene erhält und in ideellem Unterschiede bestimmt." Hegel, 12:146–47.

¹⁴⁷ Hegel writes: "Das chemische Object unterscheidet sich von dem mechanischen dadurch, daß das Letztere eine Totalität ist, welche gegen die Bestimmtheit gleichgültig ist; bey dem chemischen dagegen gehört die Bestimmtheit, somit die Beziehung *auf anderes*, und die Art und Weise dieser Beziehung, seiner Natur an." Hegel, 12:148.

¹⁴⁸ Hegel, 12:150.

sense, determining but no longer indifferent.¹⁴⁹ At the same time for the different sides to be poles, they need to be objects. If they are objects, then they are, themselves, governed by the Notion. Otherwise, we cannot guarantee that the subjective Notion is actual. This provides us with a tension: chemical objects need to be unified in order for them to be poles but also need to be in a disunity for the very category, chemism, that they try to express.¹⁵⁰ Again, we find a tension between the Notional nature of the object and its actuality. Without an external interference the tension would be resolved: the acid and the base would react with each other and form a neutral unreactive substance. Similarly, chemical objects try to unify themselves and, in the process, themselves with their oppositional object. By producing this neutral, however, they lose their determination as a chemical object.¹⁵¹ To follow our example, if acids and bases are the key chemical objects due to their reciprocal opposition, then their reaction is no longer an object of chemism because it lacks the oppositionality. The neutral, although self-subsisting, is no longer characterized by the development of the Notion that has led us to this point. Thus, it becomes *indifferent* to the oppositions that it characterizes and by which it can be a neutral. Yet, as we have seen when developing mechanism, such an indifferent external determination must once again lead to oppositionality. And it does. The oppositionality is now between the neutral and the poles. These higher-level poles are once again necessarily unified (similarly to what has gone before) but the result is now not in a neutral, but in what Hegel calls an “element” (*Element*). An element shows the full movement from opposition to unity and back. This is the truth of the “process” (*Process*) of chemistry.¹⁵² This process lastly, is governed by the Notion. The Notion is thus, at this point, still a different moment from its development. The subjective Notion still stands opposed to its objective realization in the last opposition that we find in chemism. In as far as there is a unification of opposites it comes from the determination of unity. In as far as there is split of unity it comes from the opposition. Similarly, as long as we remain within chemism, the actual development of a certain moment (thereby showing it to be concrete) is distinct from its result. Chemism remains bound by *externality*. In as far as a process returns to itself (from unity to unity, for example) it has become a different process.¹⁵³ What we require is an intimate tie between the development of the Notion and its truth of an object. The object must develop in a certain way *in order to* show itself as the concrete Notion. A process leads to another process, because that is its goal. Only then is it both properly self-determining and self-subsisting. Only then is the externality overcome because it is shown to inherently lead to the Notion. It is here that we come to the third category of objectivity: *teleology*.¹⁵⁴

¹⁴⁹ Unsurprisingly, Hegel states that chemism is “im Ganzen der Objectivität das Moment des Urtheils”. As we have seen earlier in this chapter, judgment, in the sense that Hölderlin uses it, is exactly the unity that relies on separation. Hegel, 12:148.

¹⁵⁰ Kisner, ‘The Category of Life, Mechanistic Reduction, and the Uniqueness of Biology’, 142.

¹⁵¹ Hegel writes: “[...] indem der Widerspruch des Begriffes und der Realität ausgeglichen, haben die Extreme des Schlusses ihren Gegensatz verloren, hiermit aufgehört, Extreme gegeneinander und gegen die Mitte zu seyn. Das *Product* ist ein *neutrales*, d. h. ein solches, in welchem die Ingredientien, die nicht mehr Objecte genannt werden können, ihre Spannung und damit die Eigenschaften nicht mehr haben, die ihnen als gespannten zukamen, worin sich aber die Fähigkeit ihrer vorigen Selbständigkeit und Spannung erhalten hat.” Hegel, *WL II*, 12:150.

¹⁵² Hegel, 12:151–52.

¹⁵³ Hegel writes: “die Extreme, welche in demselben Prozesse ausgeschieden werden, sind andere Objecte oder Materien, als diejenigen, welche sich in ihm einigen; insofern jene daraus wieder different hervorgehen, müssen sie sich nach Aussen wenden; ihre neue Neutralisirung ist ein anderer Proceß, als die, welche in dem ersten Statt hatte.” Hegel, 12:153.

¹⁵⁴ The last part of the chapter on chemism is quite difficult. The interpretation above provides at least a foothold from which we can understand the development from chemism to teleology. Also it coheres with Hegel’s following remarks: “Aber diese verschiedenen Prozesse, welche sich als nothwendig ergeben haben,

In order to understand teleology, Hegel follows Kant in distinguishing between two types of teleology: *external* and *internal* teleology.¹⁵⁵ Teleology explicates the relation between an end (*Zweck*) and a means (*Mittel*). External teleology is characterized by a difference between the process that leads to an end (i.e. the means) and the end itself. An example could be that we use wood to build a house. Yet, this wood could also be used for other things. It is not characteristic of the wood that it becomes a house. It is a mere *means* to an *external end*.¹⁵⁶ This does not mean that they are unrelated. If there would be no relation, then we could not understand the development as a unified process. Yet, the way which they are connected is still characterized by a subjective application of teleology: we consider the wood to be the means by which the house is built and, in understanding the wood as a means, make it part of the teleological development. By contrast, in internal teleology, this separation would not exist in such a manner: the means and the end would be in unity.

Let us first return to how we came to teleology: we wanted to show that the development of the Notion in the concrete object (through mechanism and chemism) related to the category in such a way that the category showed its own development. Mechanism could not do this as the mechanical object was indifferent to its Notional determination. Chemism could not do this as the chemical object remains in opposition to its development as the result of a process is a new process in opposition to the process of development. What we require is the category of teleology: objects are related to other objects by means of means-end unity.¹⁵⁷ They are neither immediately unified nor in a tense opposition.

In starting his analysis, Hegel commences with the analysis of external teleology. He does not yet wish to assume any necessary relation between a certain means and an end other than how we relate them. If we require internal teleology, then we need to show this dialectically. For example, I need to be able to see a text that I am typing but, being the nearsighted academic that I am, I require glasses. I then take quartz and melt it into two lenses. I might decide on a plastic frame in which case I combine an alcohol and a carboxylic acid in order to form polyester. The former is, essentially, a change of a mechanical object whose actual state is externally determined. The situation by which it is heated and formed is not inherent to its nature but is a part of the subjective teleological process by which it is fitted to my needs. Similarly, even though the alcohol and carboxylic acid might have an affinity towards one another, it is my placing them together that determines them as a type of neutral that has itself an affinity for another substance. It has become a new process because of its teleological development.¹⁵⁸ Subjectivity comes to the fore once we realize that the subject could

sind eben so viele Stufen, wodurch die *Aeusserlichkeit* und das *Bedingtseyn* aufgehoben wird, woraus der Begriff als an und für sich bestimmt, und von der *Aeusserlichkeit* nicht bedingte Totalität hervorgeht." Hegel, 12:153.

¹⁵⁵ Hegel is quite explicit about his source of inspiration and one of the main (implied) interlocutors of this chapter: "Eines der grossen Verdienste Kants um die Philosophie besteht in der Unterscheidung, die er zwischen relativer oder *äusserer* und *innerer* Zweckmässigkeit aufgestellt hat; in letzterer hat er den Begriff des Lebens, die Idee, aufgeschlossen und damit die Philosophie, was die Kritik der Vernunft nur unvollkommen, in einer sehr schiefen Wendung und nur *negativ* thut, *positiv* über die Reflexionsbestimmungen und die relative Welt der Metaphysik erhoben." As we will see, it is the latter, internal, teleology which describes how subjectivity and objectivity come together. Hegel does not, of course, agree with Kant's use of teleology as a merely "regulative ideal". We will return to this in section 2.3 of this text. Hegel, 12:157.

¹⁵⁶ The example I use here is Hartnack's. Hartnack, *Hegels Logik*, 99–100.

¹⁵⁷ Hegel, *WL II*, 12:155.

¹⁵⁸ David Lamb focuses especially on the importance of the tool with regards to the cultural subject. His reading is greatly inspired by Marx and focuses, not completely unjustifiably at times, on the role of the subject. He goes as far as stating: "In order to simplify matters we can, without any significant loss of meaning, substitute some of the key terms in Hegel's analysis of teleology. We can replace the term 'end' with 'skilled worker', since the latter represents a living end." This is, as we will see, much too strong a claim. The internal teleology

realize its end without applying to the object, thereby making the object into a means. As we can see, this is exactly the position that we were left with at the end of chemism: the object has been made to be a means that should express the Notion. Yet, at this point, this development only exists because the Notion is externally explicated in the object. The subjective notion had to realize itself, and it has been shown that an object is dialectically developed to only be an object in as far as it is part of this teleological process. At this point, however, the subjective but concrete Notion is still *external* to the object that it uses as a means.¹⁵⁹ The Notion is, in this sense, *indifferent* to the object by which it can actualize itself.¹⁶⁰ Mechanism and chemism have been traversed as types of objects that lead to an object characterized by the Notion, but what does it mean that they are a means of this process? Currently, they are only incorporated because we come upon them again and again in determining the relationship between the Notion and objectivity in the means. If they are independent, the relation is mechanical. This is then mediated in a chemical process and leads us again to the understanding that we require a means in order to understand the means.¹⁶¹ This is again characterized by the same difficulty: the relationship between the Notion and objectivity.¹⁶² In accomplishing the end, we find ourselves with a new end. As an example, I might need glasses, so that I can write a text. The glasses are the means to the writing that is the end. Yet, I only have that end because it a means to some other end (say, sharing my ideas on death). What we find is bad infinity.¹⁶³ If they are to be properly incorporated, then the means and the end need to be more

of life needs to be discussed first, and that has not been done yet at this time. Culture comes after life. For an explicitly anti-Marxist and strongly Aristotelian reading of teleology see Findlay, who, unfortunately, focuses on the implicit uses of teleology only writes very little about the explicit use. David Lamb, 'Teleology: Kant and Hegel', in *Hegel's Critique of Kant*, ed. Stephen Priest (Oxford University Press, 1987), 177; J. N. Findlay, 'Hegel's Use of Teleology', *The Monist* 48, no. 1 (1964): 1–17.

¹⁵⁹ We could say that the relation between the Notion and the object is, thus, in the means indifferent: "Begriff und Objectivität sind daher im Mittel nur äusserlich verbunden; es ist insofern ein bloß *mechanisches Object*." The means has, in this sense, not yet overcome mechanism. The means cannot be merely mechanical. Hegel, *WL II*, 12:162.

¹⁶⁰ This is, at least, how I take Hegel's following statement: "Der Zweck ist nemlich der an der Objectivität zu sich selbst gekommene Begriff; die Bestimmtheit, die er sich an ihr gegeben, ist die der *objectiven Gleichgültigkeit* und *Aeusserlichkeit* des Bestimmtheits; seine sich von sich abstossende Negativität ist daher eine solche, deren Momente, indem sie nur die Bestimmungen des Begriffs selbst sind, auch die Form von objectiver Gleichgültigkeit gegen einander haben. [...] weil seine [the concrete Notion as an end, RR] Bestimmtheit die Form objectiver Gleichgültigkeit hat, hat sie die Gestalt einer *Voraussetzung*, und seine Endlichkeit besteht nach dieser Seite darin, daß er eine *objective*, mechanische und chemische *Welt* vor sich hat, auf welche sich seine Thätigkeit als auf ein *Vorhandenes* bezieht, seine selbstbestimmende Thätigkeit ist so in ihrer Identität unmittelbar *sich selbst äusserlich*". Hegel, 12:161.

¹⁶¹ This point is also made quite clear in E: "In der endlichen Zweckmäßigkeit ist aber auch der ausgeführte Zweck ein so in sich gebrochenes, als es die Mitte und der anfängliche Zweck war. Es ist daher nur eine an dem vorgefundenen Material *äußerlich* gesetzte Form zu Stande gekommen, die wegen des beschränkten Zweck-Inhalts gleichfalls eine zufällige Bestimmung ist. Der erreichte Zweck ist daher nur ein Object, das auch wieder Mittel oder Material für andere Zwecke ist und so fort ins *Unendliche*." Hegel, *E*, 20:§211.

¹⁶² We could also follow Willem DeVries who states: "given an explanatory model that sets an extramundane, non-mechanical (and non-chemical) intelligence apart from an objective, mechanical world, there is no way to understand the efficacy of that intelligence. There must be something to bridge the gap, a means to the end." In this reading we first come upon teleology as intentionality, but which cannot reach into its efficacy on the world because it remains external to the means. It is, in this sense, a critique on Kant's view of teleology, which strived to reconcile theoretical and practical reason but, in Hegel's eyes, ultimately fails to do so because the teleology remains a subjective regulative principle. The result of this reading is the same as on my own reading. Willem A. deVries, 'The Dialectic of Teleology', *Philosophical Topics* 19, no. 2 (1991): 60.

¹⁶³ Hegel states: "Insofern die Thätigkeit wieder bloß darin bestünde, die unmittelbare Objectivität zu bestimmen, so würde das Product wieder nur ein Mittel seyn und so fort ins unendliche; es käme nur ein zweckmässiges Mittel heraus, aber nicht die Objectivität des Zweckes selbst." Burbidge explicates this in a way

intimately connected so that they do not lead to different teleological processes. In order to accomplish this, a means cannot be merely “subservient” to a subjective end.¹⁶⁴ If the category of teleology is, itself, to be teleologically developed, what we need is not an external teleology. We require a teleology in which the means and the end are as united as the objective (actuality) and subjective (Notional) components. What we require is an *internal* teleology. This means that there is a relationship between a means and an end in which that which is the means is only what it is *because it relates to an end* and that which is the end is only that what it is *because it is produced by that means*. The means and the end have to determine each other. In this sense, we can speak of a “natural goal” (*Naturzweck*).¹⁶⁵ This interrelation is how Kant determines a *living being*: “that in which everything is an end and reciprocally a means as well”.¹⁶⁶ With this development we find that actual objects cannot merely subjectively cohere with the Notion. Instead, they need to express the Notion themselves because of their very nature. This also means that their development from mechanism and chemism needs to be part of their very nature. Objects which are characterized by internal teleology need to show how they come into being and how they are sustained. They need to carry within them the requirements for and limits to their existence. It is here that Hegel returns to Aristotle. Aristotle’s use of teleology is exactly the internal teleology that Hegel seeks out that contrasts with the subjective use of teleology that he found in his own time and which, once again, tends to characterize life.¹⁶⁷ We have thus come full circle. Hegel first writes that he uses the term “logic” in the Aristotelian sense.¹⁶⁸ He then developed Aristotle’s syllogisms and showed their actual importance in the Notion. Lastly, he argued against the Newtonian physics of his time and showed that a proper understanding of the object required Aristotelian teleology.¹⁶⁹

Let us briefly return to Rödl. In the last two sections of this text, I have shown that Rödl’s logical system, as it is described in CT, is deficient and requires the development of its objects in terms of externality. It may have appeared that I was arguing against Rödl, but this need not be the case. Rödl explicitly mentions some of the categories that I have shown to be necessary: “The category of movement spans mechanical, chemical, animal and rational movements, which are governed by

that is very similar to my reading: “Each end achieved is itself transient, turning into something else; and this means that each particular teleological sequence can be understood as simply a means towards some further end, requiring a larger conceptual framework.” Hegel, *WL II*, 12:165; John W. Burbidge, *The Logic of Hegel’s ‘Logic’: An Introduction* (Broadview Press, 2006), 98.

¹⁶⁴ Lamb, ‘Teleology: Kant and Hegel’, 177.

¹⁶⁵ deVries also explicitly relates this to Aristotle in terms of “natural kinds”. deVries, ‘The Dialectic of Teleology’, 64.

¹⁶⁶ I take this translation from Lindquist. Further in the text, Lindquist emphasizes that life does not fully manage to manifest an end either but does so only finitely. A fully expressed end of nature requires the further developments of Cognition and the Absolute, which we find in end of WL. I will not discuss these in great detail in this text. Daniel Lindquist, ‘Hegel’s “Idea of Life” and Internal Purposiveness’, *Hopos: The Journal of the International Society for the History of Philosophy of Science* 8, no. 2 (2018): 377.

¹⁶⁷ Hegel writes: “Die Bestimmung des *Aristoteles* vom Leben enthält schon die innere Zweckmäßigkeit und steht daher unendlich weit über dem Begriffe moderner Teleologie, welche nur die *endliche*, die *äußere* Zweckmäßigkeit vor sich hatte.” Hegel, *E*, 20:§204.

¹⁶⁸ Hegel states this explicitly at the very end of his discussion of the Notion in general. Hegel, *WL II*, 12:28.

¹⁶⁹ How Aristotle’s account of life is to be understood is the topic of section 2.1 of this text. Whether and how the end of WL, the Absolute Idea coheres with Aristotle’s active intellect (I will explain this term and its passive counterpart in more detail in 2.1) is something that I can only briefly touch upon, as it is a very complex question. Still, reading WL as an attempt of reviving Aristotle is, in many places, tempting. Rödl gives a reading of WL which he explicitly links Aristotle’s active intellect. This is a very interesting proposal and seeing how the passive and active intellect are joint in such a view would be a worthwhile continuation of the research done here, but unfortunately outside the scope of this text. Sebastian Rödl, ‘Logic, Being and Nothing’, *Hegel Bulletin* 40, no. 1 (2019): 100, <https://doi.org/10.1017/hgl.2018.20>.

mechanical laws, by laws of stuffs and laws of life, and finally by laws of reason.”¹⁷⁰ However, he writes that these laws require us to first understand “the logical form of laws of movement in general.” Moreover, Rödl explicitly refers to WL and the developments therein. Yet, he states that it is beyond the scope of CT as he only wishes to describe the categories of the temporal “in their most abstract form”.¹⁷¹ Lastly, he claims that we still need to “develop” the “specification” of substance forms and movement forms in the case of life and rational life.¹⁷² At the same time Rödl implies that he has “*completely* described the system of these forms on the most abstract level.”¹⁷³ Now, if Rödl means to say that tense, aspect and generic thoughts form the complete unity of temporal thoughts, then he is seemingly correct. It is an elegant system which will, most likely, remain upright in some form or another once we develop the objects of thought. A snowflake might melt in my mouth. An apple is falling from a tree. Fluoric acid reacts with glass. All of these are things that we likely want to say. Yet, Rödl is mistaken if he means to say that his system is complete *in abstracto*. We require a development of the concrete objects of thought. Without them, Rödl’s system either devolves into something akin to Hegel’s merely subjective logic or it suffers from deficiencies in terms of externality which it cannot resolve. The “specifications” of mechanism, chemism, teleology, and life are *necessary* developments that allow us to understand temporal thought. Thus, speaking of a general form aside from these objects of thought is mistaken.¹⁷⁴

The dialectics of WL have shown us that we require a logical category which is not just self-mediating, but self-producing. Life. Thus, Hegel writes, this category is no longer solely characterized by the subjective Notion (*Begriff*) and its opposition to a concrete object but has become characterized by their proper unity. Hegel calls this unity the Idea (*Idee*). The Idea “indicates a *movement that is its own result*” and this is what we should find in the living being.¹⁷⁵ It is the concrete unity which produces itself *through a self-mediation*.¹⁷⁶ As such we have reached a preliminary but necessary result. We want to understand death. Understanding death required a metaphysical logic in which death can be understood. A metaphysical logic required a development of time. Understanding time required us to understand the temporal limits of the objects of our understanding in terms of externality. Understanding these limits, finally, led us to understand that we require the category of life. It should come as no surprise that an understanding of death requires us to understand the temporal limits of beings and, furthermore, that death requires us to understand life. It is the logical development of life, and its culmination in an understanding of death, which is the topic of the next chapter of this text.

¹⁷⁰ Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 186–87.

¹⁷¹ Rödl, 187.

¹⁷² Rödl, 207.

¹⁷³ Rödl, 207.

¹⁷⁴ The problem is not that Rödl is not aware of the characterization of life that I take from Hegel. Rödl states: “The teleology of life is an internal teleology, internal purposiveness, and a living being is an end in itself.” In fact, definition, and the subsequent elucidation of the different forms of life, which are the topic of the next chapter of this text, are excellent and I will refer back to them. The problem, however, is that Rödl does not show the *dialectical necessity* of neither life nor its different forms. Without this, we fall back to the problems which I will discuss in section 2.2 of this text. Sebastian Rödl, ‘Education and Autonomy’, *Journal of Philosophy of Education* 50, no. 1 (2016): 88.

¹⁷⁵ Kisner, ‘The Category of Life, Mechanistic Reduction, and the Uniqueness of Biology’, 148.

¹⁷⁶ Hegel, *E*, 20:§213.

2. Life and Death

Hegel has shown us that the lifeless object does not provide us with what we need to have a logical system. What we require is a new logical form: the form of life. Life is the necessary development of the object. Does this mean that life is the endpoint of thought? That which has fully explicated its limits? The answer is no. We have merely not yet explicated the forms of life. Once we develop life, we will find that life has its own limit. The limit of life is death. Just as how we found that the destruction of an object is necessarily a part of our understanding of an object, so the end of life is a necessary part of our understanding of life. As we have seen in the last section, Hegel is strongly inspired by Aristotle's account of life. Aristotle's most important account of life is given in *De Anima* (DA). In DA, we can find three different forms of life: nutritive (also vegetative or plant), sensitive (animal), and rational (human) life. Aristotle's forms of life in DA will form the basis for Hegel's own account in E. Thus, I will first give an overview of the forms of life in DA in section 2.1, which will aid our understanding of Hegel's understanding of life. In section 2.2, I will expand this background by explicating the contemporary works of Michael Thompson and Jesse Mulder. Both of these authors see life as characterized by a certain logical form (in Mulder's case: three forms that cohere with Aristotle's forms of life). The problem that they share with Aristotle, however, is that they do not show the necessity of this logical form, which relies on the development of the Notion and objectivity as we have seen in the previous section. I will turn to Hegel's account of life in WL in section 2.3 and show how it resolves the problems that we have seen in section 1.3. Lastly, in section 2.4, I will briefly look at how Hegel develops three forms of life in E and how these forms of life relate to the inorganic. It is this relation that characterizes death. As we will see, we cannot fully explicate life without death.

2.1 Aristotelian souls

In *De Anima* (Περὶ Ψυχῆς), Aristotle questions the nature of the soul. What Aristotle means when he talks about the "soul" is the "governing principle of living beings".¹⁷⁷ Moreover, he makes clear that he thinks that this principle has its own form of being in its own realm of inquiry. He continues by posing the question whether a soul is a substantial type of being or a dependent form of being such as a quality or quantity.¹⁷⁸ He claims that it is a primary form of being, characterized by the interrelation between matter and form. Aristotle thinks that there are three parts that can make up souls: 1. the nutritive soul, 2. the sensitive soul and 3. the rational soul.¹⁷⁹ There is a form of

¹⁷⁷ I do not wish to enter into the debate as to how Aristotle's use of the word "soul" aligns with our contemporary usages. I will merely use his definition and assume that "soul" is an acceptable translation of "ψυχή". Aristotle, *De Anima*, trans. Mark Shiffman (Hackett Publishing, 2012), 402a1-5.

¹⁷⁸ If life was not primary, it would be something akin to a reductive property or state. Aristotle, 402a20-29.

¹⁷⁹ Actually, Aristotle thinks that there are more potencies. At least, there are also the "desiderative" and the "deliberative" potencies, which correspond to the faculty of desire and that of practical reason. With regards to my project, these three forms will suffice. I will also not go into detail with regards to locomotion (which relates to desire) and imagination in this text. See also the text by Matthews. Aristotle, 433b1-5; Gareth B. Matthews, 'De Anima 2. 2-4 and the Meaning of Life', in *Essays on Aristotle's de Anima*, ed. Martha C. Nussbaum and Amélie Oksenberg Rorty (Oxford: Oxford University Press, 1995), <http://ebookcentral.proquest.com/lib/uunl/detail.action?docID=3052875>.

hierarchy here.¹⁸⁰ The sensitive soul is not without the powers of nutrition.¹⁸¹ The rational soul is not without the powers of sensation. Yet, the nutritive soul is bereft of the powers of sensation and reason.¹⁸² In this section, I will describe all three so that we can understand Hegel's version of the forms of life, which will help us understand Hegel's view of death. As we will see, a soul characterizes a distinct form of the world. The nutritive soul creates a world of nutrition, the sensible soul one of sensation, and the rational soul one of intelligibility.¹⁸³ It is this relation to an external world that is crucial for understanding Hegel's conception of life.

Aristotle does not start by simply claiming that there are three types of souls. He is open to the question as to whether there is one type of soul or one for each possible living being.¹⁸⁴ This is an important question. It seems as though there are differences in life around us, but can those differences be unified into a coherent principle which still allows for the differences? Or are there no relevant differences or overarching principle? These are exactly the questions that we come across when we discuss life in contemporary philosophy. Is a virus alive in the same way as a tiger? By virtue of what? If not, how can we say that both are "alive"? Aristotle asks the questions that we need to answer in order to engage with the study of life. Aristotle starts by following his predecessors and claims that living beings are characterized by movement. If something is in movement, Aristotle states, then there are two ways in which that could have come about: either it is moved by itself or by something else. Aristotle proposes that the movement of living beings is special because, unlike non-living beings, they move themselves.¹⁸⁵ Self-movement would be what characterizes life. At the same time, something also needs to remain the same.¹⁸⁶ It needs to be a *vital movement* which *maintains* itself. What does this self-movement mean? It cannot be mere locomotion. As Aristotle points out, plants and some animals do not seem to have locomotion.¹⁸⁷ What we require is a different type of movement.

So, what is the self-movement that maintains itself? It is the movement of self-maintenance and self-production. Metabolism and procreation. Aristotle states that the nutritive soul is the "first and most common potency of the soul, the one through which living belongs to all things." The nutritive soul's defining features are "reproduction and the use of food".¹⁸⁸ The first and most common movement

¹⁸⁰ Haase makes the case that what characterizes the different modes of living beings is not just different unrelated capacities, as this would no longer unify them as all being essential characteristics of life. Instead, we should understand them as further determinations of the same living principle. I think that Haase is correct in his analysis and will return to this point later in this text. In what follows, I do not mean to sketch a merely additive picture of powers. Matthias Haase, 'Life and Mind', *The Freedom of Life: Hegelian Perspectives*, 2011, 69–109.

¹⁸¹ Aristotle, *De Anima*, 415a1-4.

¹⁸² "The governing principle in plants seems indeed to be some kind of soul, since this alone is shared by both plants and animals; and while it does exist separately from the perceptive principle, nothing has perception without this." Aristotle, 411b20-29.

¹⁸³ Aristotle, 16.

¹⁸⁴ Aristotle, 402b1-11.

¹⁸⁵ As Aristotle makes clear, movement is a broad concept. Growth or a change of quality is just as much a movement as a change of location. I use movement in order to stay with the conventional translation. It also coheres well with my discussion of Rödl in the previous chapter. However, I would like to emphasize that I do not merely mean "locomotive movement" when I discuss "movement", but that I intend to capture a broader spectrum of changes. Aristotle, 406a1-10.

¹⁸⁶ Aristotle, 406b11-20.

¹⁸⁷ Aristotle, 410b20-30.

¹⁸⁸ Aristotle, 415a22-28.

of all living beings is taking in food: the living being needs to *metabolize* the world.¹⁸⁹ This should come as no surprise. It requires movement for living being to stay the same: the incorporation of external material. We can see this in ourselves. We need to take in food, water and oxygen. Similarly, a plant might require sunlight, water and carbon dioxide. Living beings sustain themselves by “taking in” nutrients. Not everything external is nutritious to a living being.¹⁹⁰ Nutrients are those externalities which a certain living being can internalize.¹⁹¹ By taking in nutrients, the living being necessarily makes *more of itself*. This “more” can either be a by means of growth or reproduction. In the case of something like a fungus, the difference can be difficult to grasp: is there another fungus or has the fungus merely grown? For others, like cats, the difference seems clearer. We will return to the relation between types of living beings, growth and reproduction in Hegel’s analysis of vegetative and animal organisms.

Because of the dependence on nutrients the living being also now faces the danger of being without an external world that is suitable for nutrition. A plant can be in the shadow or in a drought. A living being that is bereft of its nutrients withers and dies. Thus, Aristotle defines the basic principle of living beings in the following way: “Among natural bodies, some have life and others do not—by life I mean self-nourishment, growth and decay.”¹⁹² The interrelation between the feeding organism and the food, which has the function to sustain the feeding organism, is not the only interdependent relation that life governs. Life also creates this interdependence *internally*. We could not think of the functional parts of the living being (“functional” being their use or “*ὄργανον*”) outside of their role in the living being.¹⁹³ These parts are no longer mere parts, but *organs*. Thus, we can understand how the nutritive soul gets its name: it is nutritive because it creates an externality with regards to nutrition and because it has organs that can be understood as such in light of their function with regards to the incorporation of nutrients. As the incorporation of nutrients is what it means to be alive, on the most basic level of the plant, we can understand that organs are organs because they sustain the living being’s *existence*. Nutrition is the governing principle underlying both a relation to an *external world* and to *internal organs*. The nutritive soul is the basis for all living beings. As Aristotle states: “It is necessary for every thing whatsoever that is going to live to have nutritive soul, and it has soul from its generation until its destruction.”¹⁹⁴ We can now better understand internal teleology: it is that teleology which has itself both as a means and an end. Plants relate to the things that they consume by means of their metabolic organs. These are the means by which it sustains

¹⁸⁹ Metabolism as the transformation of chemicals within a living being is a more contemporary term (as far as I can tell it was coined in English in 1878 and French 1858), but it derives from the Greek “*μεταβολή*” which means “change” or “transformation”. When we think of metabolism we should understand its true nature as that of changing an externality into an internality. ‘Metabolism | Origin and Meaning of Metabolism by Online Etymology Dictionary’, accessed 17 May 2019, <https://www.etymonline.com/word/metabolism>; ‘Métabolisme — Wiktionnaire’, accessed 17 May 2019, <https://fr.wiktionary.org/wiki/m%C3%A9tabolisme>.

¹⁹⁰ Neither is the demarcation between what is “nutritious” and what is not the same for all life-forms. A useful parallel can be found in von Uexküll’s *Umwelt*, in which different life-forms have different “worlds” in which they live. Jakob von Uexküll, ‘A Stroll Through the Worlds of Animals and Men’, *Semiotica* 89, no. 4 (1992): 319–91.

¹⁹¹ Aristotle emphasizes however that nutrition does need to be an external that is “opposite” to the life-form. But not fully external: it is still nutrition *for* a certain life-form. Aristotle, *De Anima*, 416a12-18.

¹⁹² In other words, the living being is unlike, for example, a rock. Water does not have an external world that is “suitable” or “unsuitable” to it in anyway. It merely gets determined by the external world whatever the external world is. Ice is just as suitable for the water as being a liquid is. The continued existence of water comes through no effort of the water: it is utterly coincidental. It is, one could say, *indifferent* to its continued existence. By contrast, the living being *keeps itself alive*. “Growth”, as it is used in this quote, should be taken here in both the sense of growth and reproduction. Aristotle, 412a11-19, 413a21-30..

¹⁹³ See also Shiffman’s enlightening comments on the relation between “*ὄργανον*”, “organ” and “organism”. Aristotle, 49, note 4.

¹⁹⁴ Aristotle, 434a21-24.

itself. The organs, however, are only sustained because they perform their function. The end goal of the plant is the plant.

We can now turn to the sensible soul. The sensible soul is characterized by perception (*αἴσθησις*) and desire (*ὄρεκτικός*). Plants were characterized by the nutritive soul and animals are characterized by the sensible soul.¹⁹⁵ As stated, this does not mean that animals are without nutrition and reproduction. The nutritive soul is the basis for all living beings. What sets them apart is that animals can perceive and desire whereas plants cannot. Perception and desire might seem like two unconnected capacities, but Aristotle states that they are interdependent: “for where there is perception there is also pain and pleasure, and where these are there is necessarily appetite”.¹⁹⁶ Why would they be related? For Aristotle, perceiving means that we perceive pleasure and pain. If we perceive pleasure and pain, then we desire certain things. Thus, desire implies perception and perception desire.¹⁹⁷ We will first go into Aristotle’s account of perception. What we require for that is Aristotle’s differentiation between first and second actuality. In *De Anima* he makes use of a variety of metaphors to explain what this difference is, but the most prevalent one is the difference between knowledge and contemplation. It is the difference between someone who knows something passively and someone who is actively contemplating it.¹⁹⁸ Of the two, Aristotle states, the passive knowledge is the first actuality.¹⁹⁹ We need to have some knowledge before we can actively engage with it. It will be very hard for me to contemplate DA if I have never read it. First actuality is, in this case, also a type of potentiality: the potential to actively contemplate DA. There is a distinction between first and second potentiality as well. First potentiality is the potential for something to be (the potential for some matter to take the form of Johnny the cat for example). Second potentiality can be first actuality: it is being a type of being that can be actualized more fully. For example, having the potential to actualize a contemplation of DA once we have read it. Lastly, this complete actualization in which a living being actively actualizes the (acquired) capacities which it has is second actualization.

The first actuality of animals in terms of perception means that they are always perceiving beings. This does not mean that they witness all things, or even particular things (they could close their eyes or be asleep, for example). What it means is that they are *receptively compatible* with externality. To be an animal means that you *can perceive* things in the world.²⁰⁰ Moreover, it means that there are things which *can be seen* (*αἴσθητά*). Aristotle, thus, considers this relation to go two ways: there are things that can perceive and things that can be perceived. In the perceptible there is already something actualized. By being receptive the perceiver can come to be actualized in a way that is “the same” as the perceptible. Yet, what is required for such a receptive interaction is not trivial. As Aristotle states: “on the one hand, a thing is acted upon by its like, and on the other, it is acted upon by the unlike, just as we said: the unlike is acted upon, but once acted upon it is like”.²⁰¹ If something is receptive, then it needs to be different from that to which it is receptive. Otherwise it would already contain itself and be actualized. There would not be an impediment to its actualization. Yet,

¹⁹⁵ Aristotle, 413b2-6.

¹⁹⁶ Aristotle, 413b20-30.

¹⁹⁷ I take this argument from Shield. Shield also points out the flaws of such an argument. The question as to whether perceiving pleasure is enough to constitute desire and whether such a view implies that desire is its own capacity is central for him. Christopher Shields, ‘Aristotle: De Anima’, 2016, 191–94.

¹⁹⁸ Aristotle, *De Anima*, 412a9-11.

¹⁹⁹ Aristotle, 413a22-29.

²⁰⁰ It does not mean, of course, that all animals can see all things. A butterfly might see more than we or moles do. We are not *receptive* to ultraviolet light, but we are to other perceptibles. Aristotle, 417a10-20.

²⁰¹ Aristotle, 417a13-20.

we do not always already perceive all perceivable things, so this cannot be the case. On the other hand, the perceivable must be the same as the perceiving being if it is to affect it enough so that it can be perceived.²⁰² Aristotle ultimately resolves this by taking the change that happens to be one of actualization, both the perceiver and the perceived are actualized and this actualization is “the same”.²⁰³ This sameness, however, is one that does not destroy the inherent disunity of the perceiver and the perceived.²⁰⁴ This would be nutrition: the assimilation of an external. Thus, this second actualization is an internalization that does not destroy the external.²⁰⁵

As we can see, desire works in parallel. Animals can desire things. Things can be desirable (*ὄρεκτα*). For something to be desired, however, is for that potentiality in both to be actualized. This does not mean that the desire is fulfilled. If the desire was fulfilled, then the external would be internalized and the desire would disappear. Actualized desire is a relation to the external in which the external remains. It is this type of relation to the external that is characteristic for the sensible soul.²⁰⁶ Moreover, the relation of the sensible soul to its object is inherently characterized by plurality. My potential to see something, for example, also means that there can be things that are invisible or unseen. Darkness opposes light, but both are aspects of sight. It is the perceivable that actualizes the way my perception is in a certain way by interacting with me.²⁰⁷ It allows for differentiation. White is not black. Black is not white. Both are colors, but not the same one. There is a potential that encompasses opposites, but an actuality that can only include one: “For something that is the same and indivisible is potentially differentiated into contraries, but not differentiated in its being.”²⁰⁸ This potential for differentiation in terms of a differentiation between perceptibles is crucial to animal life. As we will see in Hegel’s version of this argument, this type of soul is what makes perceptibles into different “things”.²⁰⁹

Lastly, we come to the rational soul. The rational soul is characterized by reason (*νοῦς*). It grasps the world not merely in terms of perception, but in terms of understanding. For the rational soul, the world does not just consist of nutrition and sensibles, but of *intelligibles*.²¹⁰ How does reason differ from perception? Reason is different from perception because it is not characterized by the plurality of types of perceptions, but a duality of truth.²¹¹ The rational soul can think about the world and hold opinions on it. These opinions can be true or false. Perceptions, however, are always true.²¹² Thus,

²⁰² This is a nod to Parmenides’ objections: only the same can affect the same. We could also regard it as the problem of Hegelian mechanism: the perceiver cannot be indifferently external to the perceivable.

²⁰³ It is interesting that Aristotle coins this in terms of destruction: “Being acted upon is not a simple thing either. In one sense it is a certain destruction of something by its opposite; in another sense it is the preservation of what has being as a potency by what has being as fully itself and is like it.” Aristotle, *De Anima*, 417b2-6.

²⁰⁴ See Shield’s commentary for different reading concerning what this “sameness” could entail. Shields, ‘Aristotle: De Anima’, xxxv–xxxix.

²⁰⁵ This is more intuitive for the case of desire, but as Aristotle makes clear it also holds for perception: “when someone puts something that has color onto the eye itself, it is not seen”. It is not that the eye becomes the thing or the thing the eye, this would not be perception. Aristotle, *De Anima*, 419a11-17.

²⁰⁶ I will not go into the nuances of the different senses or the role that different respective media play for those nuances.

²⁰⁷ Aristotle, *De Anima*, 424a1-11.

²⁰⁸ Aristotle, 427a3-7.

²⁰⁹ Aristotle, 424a25-424b4.

²¹⁰ Aristotle, 429a14-19.

²¹¹ Shields, ‘Aristotle: De Anima’, 279.

²¹² I follow the translation here in saying that they are always true, but this has the implication that perception also inherently deals with truth. Although true for the Epicureans, this does not seem to be the view that Aristotle holds. “Perceptions are real.” would perhaps be a better translation: their very occurrence means that

we can see that truth does not depend in the same way on the world as perception does. For perception to occur there needs to be an actual perceivable object that affects the receptive perceiver. Yet, the particular objects in the world do not necessarily determine the possibility of thought: I could, for example, mistakenly believe that there is an object where there is none. I can think this about the object, and the thought would false. Yet, it would be a thought nonetheless. Thought is, thus, unlike perception, in that it does not rely on a particular external for it to occur. This is reflected in its mode of acquisition: perceptions rely on the senses that are particular to and fitting for a life-form. A pigeon senses the world differently from a worm and it needs be that way if the pigeon is to remain alive. Yet, truth (contrary to the sophists) is universal truth. If I think truly of a pigeon eating a worm, then this is not just particular to the life-form of the pigeon, the worm or myself. If it is true, then it is true however it is thought.²¹³ Trivially put, if a thought is true, then it is true.²¹⁴ Aristotle states:

“The cause of the difference is that perception at work is of particulars, but knowledge is of universals, which in some way are in the soul. Thus, one can think on one’s own when one wishes, but one cannot perceive on one’s own, since something perceptible must be present—which holds true even of sciences that are of perceptible things, and for the same reason: perceptibles are among the things that are particular and external.”²¹⁵

Universals, forms without matter, are the proper objects of thought (*νοητον*).²¹⁶ Nutrition relies on material and destroys the form. Perception also relies on materialized form for its object. The object of thought, however, is form independent of material.²¹⁷ This has some direct consequences for the nature of the rational soul. The nutritive soul related to the external purely through matter, so it was this determination that was crucial: its material takes in other material and brings it under the form of the plant. The sensible soul, in turn is dependent both on the material and on the form of its externality. Thus, perception requires organs that can take in the form, but which need to be actualized by matter, both in the case of the perceiver and of the perceptible. The actual perception is, thus, particular and relies on particulars.²¹⁸ The rational soul, lastly, does not by its own nature depend on the material. It relies on the universal form. This makes its nature likewise universal. The rational soul is universal. It has no particular organ on which it depends in its universality.²¹⁹ Therefore, it cannot be destroyed by any destruction of a particular organ in its nature as universal. This cannot be right. The complete independence of the rational soul from the particular would mean that it is outside of time: it could not inform living particular beings. Yet, this is not how

there was a perceivable object that made it occur. Moreover, the perception can only occur if the perceivable actualized the perceiver in the “same” way as it. Stating that this pertains to truth would be an additional step. Aristotle, *De Anima*, 426b11-17.

²¹³ Aristotle makes the distinction between “good” and “true”, something can be good for me as a certain life form, but something is true universally. One could also spot here the difference between theoretical and practical reason, but the exact interpretation is controversial. In my example, I have not yet stated what the thought about the pigeon eating the worm will look like (particular or universal). Aristotle, 431b10-15.

²¹⁴ The link with Rödl’s remarks on Frege’s notion of truth is immediately apparent. Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 19.

²¹⁵ Aristotle, *De Anima*, 417b19-29.

²¹⁶ Shields emphasizes that terms for the object of perception and reason are both used potentially and actually: that something is *νοητον* can mean both that I actually think about it or that it can be thought about. Aristotle, 426b18-22; Shields, ‘Aristotle: De Anima’, 293.

²¹⁷ Aristotle, *De Anima*, 430a7-9.

²¹⁸ As Aristotle states: “the perceptive power does not exist without body, but intellect is separate.” Aristotle, 429b2-7.

²¹⁹ Aristotle, 429a20-30.

Aristotle initially characterizes the intellectual (that is, rational) soul. He states that it is “possibility”²²⁰ and that “this is not the forms as being-fully-itself, but in potential.”²²¹ “Possibility” does not mean merely that the intelligibles are somehow not always already thought in the way that perceptible are not always already perceived. Aristotle states:

“Once it [the rational soul, RR] has come to be each of the intelligibles, as when one is said to be an active knower (which is the case when one is able to be at work on one’s own), even then it is in a certain way the intelligibles in potential, though of course not like the way it was before it learned or discovered them; for now it is able to think itself.”²²²

What Aristotle seems to mean is that the intellect has taken in the forms. Perception could take in forms as long as the form was actualized by a perceptible. The intellect, however, can think forms *as forms*. Aristotle states that the intellect is able to “think itself”. Does this mean that this intellect, itself, is such an intelligible?²²³ Aristotle argues that this would do away with the intellect. If the intellect becomes an intelligible, then it could not be that which makes the intelligible intelligible. If mere intelligibility itself is that by which intelligibility can be appropriated, then all intelligible things would be intellectual. This cannot be the case as the intelligible forms can be actualized. The intelligibles can be actualized, yet the intellect cannot, it is fully potential.²²⁴ Thus, we need gain some *other* understanding of how the intellect thinks itself.

In DA, Aristotle distinguishes the passive intellect, which is characterized “by the becoming of all things”, and the active intellect which is characterized “by producing all things”.²²⁵ It is this latter intellect which, if separated, would be “deathless and eternal”.²²⁶ It seems to be that structure which *produces* the intelligible world. Things are things because they actualize forms, and it is the active intellect which produces (and structures) these forms and thus being. Without the active intellect, there can be no particulars. However, the active intellect is not itself tied to any particular matter. It is actualized fully in its production of forms and is, thus, always fully actualized.²²⁷ It is the active

²²⁰ Shiffman states that this is a translation for *δύντων* which is the adjectival form of *δύναμις*, which can also be more widely construed as power or some inherent possibility for change that is characteristic of a thing (think of Rödl’s movement forms). Aristotle, 83, note 12.

²²¹ Aristotle, 429a27-29.

²²² Aristotle, 429b6-9.

²²³ “One might further wonder whether even the intellect itself is intelligible.” Aristotle, 429b25-28.

²²⁴ In other words, the intellect is “unmixed”, whereas the intelligibles as actualized forms are not. A view could perhaps be developed in which every intelligible is intellectual. Whether such a view would cohere with Aristotle’s views would require further research. At the very least we would require an understanding of how the intellect is both “fully potential” and actual. At the very least, this would most likely a closer look at the interrelation between the passive and the active intellect. Shields, ‘Aristotle: De Anima’, 310.

²²⁵ The brief passage in which Aristotle discusses the active intellect (III.5) is one of the most highly debated parts of the whole of DA and perhaps even of all of Aristotle’s works. I do not aim to have the final word. At most, I hope to provide a plausible reading which does not touch upon many of the nuances of this section. Aristotle, *De Anima*, 430a13-17.

²²⁶ Aristotle explicitly mentions the “separate” here, the reason for this is that this intellect cannot be “acted upon”. Aristotle, 430a20-30.

²²⁷ This is how I take Aristotle’s remark in III.8 where he says that the “intellect is a form of forms”. The hand is the “tool” by which tools become tools. The structure of the active intellect is such that it is that by which forms become forms. For a different analysis of the potential of the hand to form all tools (and in turn the intellect all forms), see Shields and Ferrarin. Aristotle, 432a1-3; Shields, ‘Aristotle: De Anima’, 343–44; Ferrarin, *Hegel and Aristotle*, 282.

intellect by which the passive intellect can become things without actualizing them in matter.²²⁸ It is in this sense that the active intellect is “active”. Aristotle then turns to what it means to actually think. The intellect that actually thinks is the one that can be acted upon (i.e. that can learn new things) and which actually has thoughts that are made true or false by the world. This is the passive intellect which *becomes* different things. Because it can be acted upon, this intellect is perishable. It is this very perishability that is a requirement for thought.²²⁹ Aristotle states: “the [passive, RR] intellect that is acted upon is perishable, and without it nothing thinks.”²³⁰ It is the interaction of the passive and the active intellect that characterizes the rational soul. The nutritive soul was that principle of life by which the external world was turned into nutrients. Things were nutrients in as far as they could be internalized; the external world was produced as nutritious in as far as it could be made internal. The nutritious was produced by the feeder as something that *can be consumed*. Things were perceptible in as far as they remained concretely separated; perception relied on a shared actualization of form in two separated objects. The perceptible was produced by the perceiver as something that *can be perceived*. Lastly, the passive, perishable, intellect becomes all forms. The active, deathless, intellect produces all forms. Something *can be thought* in as far as the passive intellect becomes it: this means that the passive intellect is changeable, affectable, and perishable. The active intellect is that structure which allows for thought, but *which is just as much part of the intellect*. For nutrition to occur there needs to be both a feeder and that which is fed on. For perception to occur there needs to be both a perceiver and that which is perceived. For thought to occur there needs to be both an active and a passive intellect. It is in this sense, I think, that the intellect *thinks itself*. It is in this sense that thought needs to be both *perishable* and *deathless*.

We now have an overview of the Aristotelian concept of life that informs Hegel’s account. Before turning to Hegel’s own works, however, I will look at authors who give a contemporary account of life that, like the accounts of Aristotle and Hegel, does not strive to reduce life to mechanical motions. Aristotle can help us to understand Hegel’s account of life. Hegel’s dialectic will help us to show the necessity of Aristotle’s different forms of life. Their joint account will help us to understand life and, in the process, death. Death is what I intend to illuminate. By looking at contemporary accounts of life we can see the systematic importance of their ideas for an understanding of death.

2.2 Vitalism

In this section I will discuss contemporary accounts of life. I will focus on authors who understand that life needs to have its own logical form. I will not reiterate arguments about the irreducibility of life to mechanism. Such arguments have been made by the authors that I will discuss, as well as in section 1.4 of this text. For the purpose of this text, I will consider those arguments to be convincing. I will call the school that states that life is an irreducible quality “*vitalism*”.²³¹ Vitalism can roughly be characterized by a negative and a positive side. The negative side tries to substantiate what life is

²²⁸ Shields makes an in-depth analysis of whether “active thoughts” as used in III.5 of *De Anima* are concerned with a deathless aspect of the human being or of a divine being. He makes it clear that a case can be made for both. It is one of the most controversial parts of *De Anima* and I have no hope of resolving the issue here. The issue deserves more attention than I can give it here. Shields, ‘Aristotle: De Anima’, 312–29.

²²⁹ Aristotle, *De Anima*, 430a25-27.

²³⁰ Aristotle, 430a24-27.

²³¹ Not all definitions of vitalism are as demanding as my view, see Weber. The definition here is roughly in line with Mulder. Bruce Weber, ‘Life’, in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Summer 2018 (Metaphysics Research Lab, Stanford University, 2018), <https://plato.stanford.edu/archives/sum2018/entries/life/>; Jesse M. Mulder, ‘A Vital Challenge to Materialism’, *Philosophy* 91, no. 2 (2016): 153–82.

not. Specifically, life is *not logically reducible* to the non-living.²³² The positive side tries to state what this irreducible logical form looks like. They entwine, of course, stating that life is not reducible without a positive account leaves one in an empty state of *aporia*. A positive account without a negative argument does not suffice because its necessity is not clear. Why produce another logical form if the normal one suffices? In this section, I will focus on the vitalism that is proposed in the works of Michael Thompson and Jesse Mulder. I will first provide the basic outline of the negative argument in the works of Thompson and Mulder. I will then discuss their positive accounts and show why they are, ultimately, incomplete.

At its core, the negative argument consists of the following dilemma: describing life either presupposes life or it cannot grasp life. Trying to create a list of characteristics by which we can define life seems fraught with this problem, no matter how much we try to finetune it. Thompson eloquently states: “My suggestion will be that *every* candidate list-occupant must strike the sub-metaphysical Scylla of ‘DNA’ or else sink into the tautological Charybdis of ‘organs’, and that every such list may as well be replaced by the empty list.”²³³ What does he mean by this? Mulder explains that DNA is an exemplar for the “sub-metaphysical” because it is not yet imbued with life.²³⁴ We can point towards any sort of molecule, structure, entropy, stability or growth, but it does not pertain to life unless it is *of life*. That is, it needs to play a role in understanding a life-form and its lifecycle. DNA is a useful indicator for life *because* it plays a role in the reproduction of living beings.²³⁵ In turn, if any descriptor for life only functions because it already refers to life, then it seems to be necessarily tautological. The problem is resolved by realizing that the difference between life and non-life is not in the content that describes certain objects and not others. It is in the very form that governs some being in a *living way*.²³⁶ Thompson concludes: “Thought, *as thought*, takes a quite special turn when it is thought of the living- a turn *of the same kind* as that noticed by Frege in the transition from thought of an object to thought of a concept”.²³⁷

Thus, the negative argument culminates in a conclusion about what life is not. Life is not some content that accords with a logic which is equally characteristic of non-living content. Life involves an irreducible logical form. As Thompson states: “vital categories are logical categories.”²³⁸ Yet, what does it mean to say that life is a logical form? Answering this brings us to the positive side of the vitalist project. For Thompson and Mulder life is characterized by teleology.²³⁹ Life is characterized by a *because*, not in the sense of an accidental cause, but in the sense that it inherently has a way in which it should be. Why does ice melt? Well, *ice melts in high temperatures*. Yet, there is no

²³² Mulder does not use the term “logic” when discussing life. Yet, the fact that life needs to have a different relation to its form from non-life as well as his use of “vital categories” cohere with the way I use logic. Mulder, ‘A Vital Challenge to Materialism’, 181.

²³³ Michael Thompson, *Life and Action* (Harvard University Press, 2008), 39.

²³⁴ DNA is here taken as a specific type of molecule. DNA as part of the reproductive cycle plays a different role but such a view presupposes a living being, as Mulder will make clear. As a comparison, we could say that living things grow, but without a principle of living there is no difference between a living being growing and a pile of snow getting higher. See also Thompson p. 43-47. Ernst Mayr, *The Growth of Biological Thought: Diversity, Evolution, and Inheritance* (Belknap Press, 1982), 54; Thompson, *Life and Action*, 37.

²³⁵ Mulder, ‘A Vital Challenge to Materialism’, 158.

²³⁶ Rödl makes a similar point in CT concerning perdurance and endurance. If temporality is to be an element of a thought instead of its form, then this leads to unresolvable contradictions no matter in what way it is made into an element. The parallel with trying to find a place for life as an element of logic of objects is evident. Rödl, *Categories of the Temporal: An Inquiry into the Forms of the Finite Understanding*, 95–99.

²³⁷ Thompson, *Life and Action*, 27.

²³⁸ Thompson, 48.

²³⁹ When I use the term “teleological” in this section, I refer to *internal teleology*.

teleological value to this melting. If the temperature was lower than it would remain frozen. Either way will be equally fitting for ice. Moreover, *any way* in which the ice changes or become the same will be fitting for the ice.²⁴⁰ By contrast, a plant that is in the sunlight will, generally, be performing photosynthesis. Photosynthesis is part of the lifecycle of the plant: it performs photosynthesis *because* this provides the plant with sustenance. It needs sustenance to form seeds. It has seeds so that it can create more plants. Being in the light is *proper* for the plant life-form.²⁴¹ This analysis brings us to what Thompson calls “the wider context” of life.²⁴² Understanding living beings requires us to understand them in the context of their life-forms. Non-living beings do not require this in the same way. For example, let us assume that we see a kitten playing with a red stone. Now, the fact that the stone is red is immediately clear. We see the stone and we see it as being red.²⁴³ The stone might not remain red, it might be white later on, but that is only accidentally related to the fact that it is red now. Nothing about the redness now affects our understanding of the whiteness later. This does not hold for the kitten. We recognize that this cat is a kitten because we understand that it is part of a lifecycle.²⁴⁴ Similarly, we could say that eating is only eating in light of a living being that sustains itself. Growth is growth in light of a living being growing “into itself”.²⁴⁵ The kitten feeds *because* this allows it to grow. It grows *because* this will eventually allow it to turn into a sexually developed adult cat. The kitten will become an adult cat *because* this will allow it to procreate and so continue the cycle of life for this feline species. It is the lifecycle that allows us to make sense of these activities. Moreover, we can see this in the *organs* of the *organism*.²⁴⁶ As Aristotle already made clear, an eye is an eye because it has a function for a living being.²⁴⁷ An eye that is cut from the body is an eye in name alone.²⁴⁸ It is the life-form that forms the teleology of the living being.²⁴⁹

The specifics of these life-forms are captured by a specific logical form that Thompson calls “*natural-historical judgments*”.²⁵⁰ They are not judgements about the particular living beings, but about their forms. Not “Johnny the cat has four legs.”, but “The cat has four legs.” Judgments of this type do not necessarily apply to all, or even most individuals of the species.²⁵¹ They capture the lifecycle of how a

²⁴⁰ Or as Thompson writes, it does not have “normal conditions”. Thompson, *Life and Action*, 70.

²⁴¹ We could think again of Aristotle’s plant, which has separated the world in that which is proper to it (nutrients) and that which is improper (non-nutrients). Thompson, 40–41.

²⁴² Thompson, 56.

²⁴³ The later Wittgenstein might dispute that *any word* has a meaning outside of a wider context of being. This might be true, but it is not immediately the focus of the *teleological* context that Thompson provides. Ludwig Wittgenstein, *Philosophical Investigations: The German Text, with a Revised English Translation 50th Anniversary Commemorative Edition* (Wiley-Blackwell, 1991).

²⁴⁴ How we should understand a statement such as “Johnny, the kitten, is red.” is at this point not yet clear. It seems as though either redness is different for living beings as compared to non-living beings or living beings are characterized both in living and non-living ways but remain the same being. I will return to this problem in section 2.4 where I discuss the interrelation of ontological levels.

²⁴⁵ The example is mine, but it is an adaptation from Thompson’s quasi-sharks. Thompson, *Life and Action*, 54.

²⁴⁶ Thompson, 60.

²⁴⁷ Aristotle succinctly states: “What is true of a part must, indeed, be understood with reference to the whole of a living thing’s body”. Aristotle, *De Anima*, 412b21-23.

²⁴⁸ This does not mean that an eye that stops working is no longer an eye. It might be a diseased eye in an otherwise functional body. Disease, for Hegel but likely not for Thompson, is only something that exists at the level of the animal because only the animal *is not an immediate life-form*. Hegel, *E*, 20:§ 371-74.

²⁴⁹ Mulder states: “Life forms are intricate, teleologically unified principles governing the full life cycle of their instances.” Mulder, ‘A Vital Challenge to Materialism’, 180.

²⁵⁰ Thompson, *Life and Action*, 64.

²⁵¹ Thompson gives the example of the mayfly. Although, *the* mayfly mates before death, statistically most of the actual mayflies will not. Moreover, there may even be times at which no mayflies are actually mating. This is not in principle excluded. Thompson, 68.

living being *ought* to develop.²⁵² Natural-historical judgments could remind us of Rödl's generic thoughts. Natural-historical judgments seems akin to the nexus of the substance form and movement form.²⁵³ Yet, Thompson explicitly states that claiming that natural-historical judgments are generic might be too coarse. Generic thoughts cover all unities of substance form and movement forms. It does not, in and of itself, provide us with an internal teleological structure. Water, as we have seen, does not have such an inherent teleological structure with regards to their environment. There is a proper situation for life-forms because it is inherent to life-forms that they bring forth these situations. Their teleology incorporates how they come into the proper external situation.²⁵⁴ Mulder calls these kinds of movement forms level-1 powers and the substances to which they belong level-1 substances.²⁵⁵ He contrasts level-1 powers with level-0 powers. Level-0 powers are similar to those that we have seen in Rödl's CT. They are powers of non-living objects. Level-1 powers, on the contrary, "manifest in movements that display an additional explanatory relation: the power itself explains why the proper *circumstances* for the manifestation to come about arise. Level-1 powers form internally teleological systems whose unity is the corresponding level-1 substance form."²⁵⁶ Antelopes move to the wells *because* they can drink there.²⁵⁷ Plants disperse seeds *because* this allows for the growth of new plant-life at other accommodating areas.

We now have a clearer view of the two sides of the vitalist argument. Understanding life cannot be done from the logical form of non-life. This was the negative claim. The logical form of life has to be one that is characterized by the teleological unity of the life-form. This is the positive claim. Yet, do these arguments together suffice in showing that the logical form that coheres with life is necessary? Surely, it is at least plausible. The arguments for the irreducibility of logical forms seems convincing. We know that if we want to think about life, then we require a different logical form. Moreover, the form that is described seems intuitively fitting. We do seem to understand living beings by their lifecycles. But is this enough? With regards to the negative side, we have shown that life is irreducible. Yet, perhaps this not an argument *for*, but one *against* the logical form that coheres with life. Perhaps the fact that life cannot be captured in our non-living-logic just means that it is a mistake to think that life is a sensible metaphysical category. For example, we could probably construct a metaphysical logic, which has categories which fall together in an odd way, but which appeal to some intuition we might have. Let us propose the *pessimistic logic*, which relies on the principle that objects are never the way we want them to be. Such a logic creates a link between the nature of some external object and our desires. Desires, as we have seen, are not properly grasped

²⁵² Thompson, 75.

²⁵³ Thompson, 68–69.

²⁵⁴ For example, plants metabolize glucose, but a proper understanding of their form does not just tell us that plants metabolize glucose: it tells us that plants have photosynthesis which produces the glucose. Moreover, the glucose is then used by the plant to sustain its photosynthesis.

²⁵⁵ A power is very close to a movement form, but it incorporates a circumstance. Mulder defines it in the following way: "*Power ascription*: (Substance Form) have a power to instantiate (Movement Form) in (Circumstances)." These powers can manifest. "*Power manifestation*: A power manifests in a (Movement) that instantiates (Movement Form), leading to (End Result) when no interruption occurs." Whether this inclusion of circumstance is tenable with regards to the dialectic that Rödl proposes seems doubtful as it already contains a form of externality, but it could prove to be an interesting alternative. Jesse M. Mulder, 'Varieties of Power' (2018), 5.

²⁵⁶ I will not discuss the level-2 and level-3 powers and substances here. They correspond roughly to animal and rational life in E. Although their elucidation is elegant, the problems that I discuss in this section remain. Mulder, 9.

²⁵⁷ For Thompson, how the living being gets into a proper situation is part of understanding the life-form. I am inclined to agree. The relation to the external also plays a key role for Hegel, as we shall see in section 3.1. Thompson, *Life and Action*, 79.

purely by mechanical objects: they require a logic which coheres with life. This means that the objects of the pessimistic logic are irreducible to a mechanical logic. Intuitive as it may be for some, however, it is clear that the pessimistic logic should be rejected. We could only introduce it because we have not a necessary demarcation of which logics are necessary for thought. Mere irreducibility is not necessity. The negative argument alone does not suffice to show necessity. Moreover, this problem cannot be resolved by trying to see whether it applies to reality. The forms of logic are the forms of being. We can only think something in as far as it already adheres to a logical form. The logical form is the requirement for a thought and thus the content of that thought cannot prove to be a falsification of the form of thought.²⁵⁸

We might try to defend the logic that coheres with life by stating that, without an irreducible logical form, we cannot describe life. Yet, why not simply reject life? Mulder claims that rejecting life “is, of course, absurd.”²⁵⁹ Yet, he does not make clear why it is absurd.²⁶⁰ Is this absurd then meant to imply that life is so commonsensical, so indisputable that this suffices as a standalone argument? Clearly, this cannot be the case. Mulder, only a few lines before, introduces the category of witchcraft. Witchcraft was a certain type of explanation that we stopped having.²⁶¹ It was perhaps irreducible, but in the end, we had to reject it. Mulder claims that the fact that we stopped believing in witches means that the fact that we still believe in life is meaningful. Yet, is it not the fact that we at one point had commonsense intuitions with regards to the status of witches and turned out to be wrong that is significant? If we changed our mind about something as accepted as witches, then there seems to be no reason to believe that we could (and perhaps *ought*) to change our mind about life. Mulder then tries to shift the burden of proof. Is the materialist not equally susceptible to this charge? If we require more than common sense, then it seems as though materialism faces the same problem.²⁶² Mulder is right. If materialism is shown to be a proper logical form, then it *too* has to be shown to be necessary. Yet, this does not resolve the problem. It exacerbates it.

The problem of the negative side of the vitalist argument is also present in the positive side. Thompson and Mulder define a logical form and state that it is life. But why is it *this* logical form? It coheres well with our intuitions. Yet, as we have seen, this does not mean that it is the proper logical form of life. Perhaps there is a deeper laying form of thought that is also irreducible and is the true face of the logic of life. It seems, at this point that we have returned to a reflective equilibrium. We try to find logical forms and show their interrelation in terms of reducibility. The applicability of these forms, however, relies on our intuitions. These intuitions can change, meaning that the fact that we currently have these intuitions is not sufficient. More importantly, any interrelation between the irreducible frameworks becomes unclear. What is it for a living sparrow to be hit by non-living brick? This can seem like a question that is senseless as what it is for the number two to be painted pink. The logical forms of thought either are disparate and cannot be connected or connected in some underlying sense of logic. Irreducibility is not necessity. Irreducibility is not a proper relation between logical forms. This problem haunts us too in both sides of the vitalist argument. What we require is a

²⁵⁸ Moreover, because the forms of thought are proven to be irreducible, the content of another form of thought cannot falsify a form of thought either.

²⁵⁹ Mulder, ‘A Vital Challenge to Materialism’, 161.

²⁶⁰ In a footnote, Mulder refers to Barry Stroud’s works. Stroud tries to show that we cannot have a discourse concerning certain categories without presupposing that they are valid. Yet, the validity in the case of life seems questionable. As we will see, such a development needs to be done through the dialectic. Barry Stroud, *Engagement and Metaphysical Dissatisfaction: Modality and Value* (Oxford University Press USA, 2011).

²⁶¹ I assume that witchcraft has some logical form that is relevantly different here. If this is unacceptable, I refer back to the pessimistic logic. Mulder, ‘A Vital Challenge to Materialism’, 160.

²⁶² Mulder, 161.

logic that determines itself as necessary. A logic that shows how its different modes of being interact. This goes both for the materialist and the vitalist forms. We require a dialectic. As we have seen in section 1.4, Hegel provides us with such a dialectic and shows the necessity of both matter and life.²⁶³ This does not mean that the vitalists are wrong in their positive or negative accounts. Their work will be shown to be a valuable contemporary elucidation of the forms which Hegel develops. Yet, they need to be carried by the dialectic. In this way we can see how Hegel is still relevant for the contemporary discourse on life. He provides the required grounding and this grounding, for Hegel, requires death. It comes as no surprise that Mulder and Thompson only spend very little time on death. An improved account, which strives to incorporate the dialectic will create the possibility to resolve the issues of grounding. In order to do so, I will first discuss Hegel's account of life.

2.3 Hegelian life

Life is an important concept for Hegel. It is the first category that is characterized by the Idea: the Idea characterizes those categories that properly bring together objectivity and subjectivity. Hegel has shown how the dialectic develops up to the category of life in his chapters on the subjective logic and objectivity. Let us, for the sake of clarity, return briefly to the important movements of these chapters, before we continue to life itself. This will help us to see what life is *not* reducible to.

For Hegel, life is unlike *mere subjectivity*. Mere subjectivity relates itself to the actual world in the sense that it strives to be *about* the external world. Speaking simply, it is the mere *application* of a logic that determines itself for a thinker. But mere subjectivity does not show its own *actuality*, nor its *applicability*. By working out the categories of the Notion in the form of syllogisms, we find that a subjective logic leads us to a self-mediated unity of its moments (i.e. universality, particularity and individuality). It is this unity that shows that the subjective logic needs to be actualized, which brings us to the categories of Objectivity.²⁶⁴ Yet, life is not mere objectivity either. Objectivity characterizes itself by unifying the moments of the Notion in actuality. Upon working out objectivity, however, we see that objectivity cannot show *how* it is actualized. The subjective Notion and the concrete object remain separated. Thus, objectivity requires a return to subjectivity in which it shows itself to be produced according to the Notion. It is this movement that I have followed in section 1.4 of this text.

What we require is a unity of subjectivity and objectivity that goes beyond the naive dominance of either of its components.²⁶⁵ It is here that we enter the domain of the Idea, which is characterized by truth. Truth, for Hegel, does not stand for the truth by which we try to apply a formal model to the

²⁶³ As we have seen, Rödl does provide a dialectic that strives to develop thought from itself and show the necessity of the categories. Section 1.4 contains Hegel's development of the non-living being and shows that it necessarily requires life. I will use the rest of this text to develop what Hegel's account of life entails.

²⁶⁴ André Lécrivain states: "it is about explaining the movement of concretization and interiorization of the exteriority through which the concept provides itself with its proper being, up to the moment when its subjective form wholly coincides with its objective content." Lécrivain, 'Actuality and Objectivity in Hegel's Philosophy', 340–41.

²⁶⁵ See also Karen Ng's enlightening text on the development of the "subjective subject-object" and the "objective subject-object". She traces a development of German Idealism through these terms through Kant, Fichte and Schelling. She gives a reading of Hegel in which the self-consciousness is inherently in tension with the consciousness, the spiritual with the material, and so on. As we will see further in this text, I think that such a tension should be seen as being between higher and lower orders of life. Hartnack, *Hegels Logik*, 102; Karen Ng, 'Life, Self-Consciousness, Negativity: Understanding Hegel's Speculative Identity Thesis', ed. T. Khurana, *The Freedom of Life: Hegelian Perspectives*, 2013, 33–67.

world and checking whether the world seems to cohere.²⁶⁶ Truth is understanding how the world *itself* expresses the Notion and its derivation. Objects, in as far as they do not manage to cohere properly with the Notion, are *untrue*. Because objects have concrete being only in as far as their category determines them, this means that the undeveloped categories produce objects which are not completely “concrete”. Objects which have the capacity to be “developed” further by something outside of their own determination. Hegel states:

“Die endlichen Dinge sind darum endlich, insofern sie die Realität ihres Begriffs nicht vollständig an ihnen selbst haben, sondern dazu anderer bedürfen [...] Daß die wirklichen Dinge mit der Idee nicht congruiren, ist die Seite ihrer *Endlichkeit, Unwahrheit*, nach welcher sie *Objecte*, jedes nach seiner verschiedenen Sphäre, und in den Verhältnissen der Objectivität, mechanisch, chemisch oder durch einen äusserlichen Zweck bestimmt ist.”²⁶⁷

We have seen that the categories of objects which do not determine themselves according to the Notion are ultimately sublated. What we required was a unity of the Notion and objectivity which showed not only its own actuality, but also how its own actuality *came to be*. This coming-into-being also needs to follow the development of that category itself: the coming-to-be of the concrete Idea needs to follow the sublation of concrete objects under a higher principle. As we have seen, this end, which determines the objects, needs to be an internal end. If the Idea is concrete, then it should be a self-end (*Selbstzweck*): an end that strives to manifest itself by means of the mechanical, chemical and external teleological objects. If this teleology is *internal*, then they should be permeated by this process. Objectivity, on this view, is characterized not by being (*Seyn*), but by *becoming (Werden)*.²⁶⁸ Objectivity is characterized by the fact that it can be overcome. It is inherently a *transitory* form of being (*Vergängliche*).²⁶⁹ At this point, these phrases can seem quite abstract, but they become much clearer once we return to Aristotle’s soul. The clearest example would be that of nutrients. Nutrients are mechanical or chemical materials (such as minerals) which only exist *as nutrients* because they *can be consumed*. Nutrients are thus characterized by the possibility of change into a higher determination: life. Life, when considered as a logical form, has the characteristics which Hegel seeks. Thus, Hegel takes it to be the primary concrete category of the Idea:

“So ist die Idee ERSTLICH das Leben; der Begriff, der unterschieden von seiner Objectivität einfach in sich, seine Objectivität durchdringt, und als Selbstzweck an ihr sein Mittel hat und sie als sein Mittel setzt, aber in diesem Mittel immanent und darin der realisirte mit sich identische Zweck ist.”²⁷⁰

Of course, merely stating that life is the first form of the Idea is not enough. It still needs to be shown *how* life manages to concretely manifest the Idea in its relation to objectivity. In order to do so, Hegel separates the section on life into three parts:

²⁶⁶ “Der Gegenstand, die objective und subjective Welt, überhaupt *sollen* mit der Idee nicht bloß *congruieren*, sondern sie sind selbst die Congruenz des Begriffs und der Realität; diejenige Realität, welche dem Begriffe nicht entspricht, ist blosser *Erscheinung*, das Subjective, Zufällige, Willkührliche, das nicht die Wahrheit ist.” Hegel, *WL II*, 12:174.

²⁶⁷ Hegel, 12:175.

²⁶⁸ Hegel, 12:177.

²⁶⁹ Hegel, 12:176.

²⁷⁰ Hegel, 12:177.

1. The living individual (*Das lebendige Individuum*)
2. The process of living (*Der Lebens-process*)
3. Genus (*Die Gattung*)²⁷¹

Let us first turn to *the living individual*. In this first part, Hegel focuses on the *internal* structure of a living being before turning to the relation to an *external* object. As we have seen, the living being needs to be characterized by the categories of the Notion (universality, particularity and individuality). Unlike objectivity, however, these categories need to concretely *produce* one another in the object. In the living individual itself this production is characterized by *organs*:

“Diese Objectivität des Lebendigen ist *Organismus*; sie ist *das Mittel und Werkzeug* des Zwecks, vollkommen zweckmässig, da der Begriff ihre Substanz ausmacht; [...] Nach der Aeusserlichkeit des Organismus ist er ein vielfaches nicht von *Theilen*, sondern von *Gliedern*”²⁷²

Hegel clarifies that organs (or “members”) are only what they are in so far as they play a role with regards to other organs. As we have seen in the works of Aristotle and Thompson, organs cannot be separated from the lifeform which they produce. It is the interaction of organs which sustain the living individual. As an example, let us think of the heart and the lungs of a cat. A heart is not a lung. It has a different role in the organism. Yet, a heart pumps around the oxygenated blood which the lung provides. Reversely, it is the lungs which provide the heart with the oxygen which it requires to pump the blood around the body. The organs *inter-determine* each other in light of the organism which they sustain. They continue to produce each other as *both means and ends* and by doing so they produce the organism. Both the heart and the lung are needed to sustain the cat. It is not difficult to see how the inner structure of the organism relates to the Notion. The organs can be seen as the individuals, which are particularized in their function for the living individual. The living individual is the universal that is brought forth by the interaction of the organs and is the requirement by which the organs exist *as organs*. The internal teleology is characterized by the continued existence of the organism, which keeps *producing itself*. Hegel writes:

“Der Begriff producirt also durch seinen Trieb sich so, daß das Product, indem er dessen Wesen ist, selbst das Producirende ist, daß es nemlich Product nur als die sich eben so negativ setzende Aeusserlichkeit, oder als der Proceß der Producirens ist.”²⁷³

Yet, there is an interesting contradiction in the notion of organs. On the one hand they are united in the organism: they are unified into a single being. On the other hand, they need to remain different in order for them to produce the organism through *each other*.²⁷⁴ The proposal that organs are immediately differentiated from one another cannot suffice. This would return us to a type of

²⁷¹ Lindquist translates these as the “structure process”, “assimilation process” and “genus process” respectively. His choice in translation is not as strange as it seems. Life is characterized by the Idea and Hegel explicitly states that the Idea is characterized by processes. Its truth is *active*. The aspects of life are likewise characterized by processes. Lindquist, ‘Hegel’s “Idea of Life” and Internal Purposiveness’, 387; Hegel, *WL II*, 12:177.

²⁷² Hegel, *WL II*, 12:184.

²⁷³ Hegel, 12:185.

²⁷⁴ I take the dilemma and the direction towards the process of living from Lindquist. He does not, however, go into sensibility, irritability and their relation with regards to the developments in Teleology into account in the same manner. Lindquist, ‘Hegel’s “Idea of Life” and Internal Purposiveness’, 390.

mechanism where the determination of an organ as a different organ remains *indifferently* outside of that organ. The problem becomes clearer once we see that what is required is a relation to the *inorganic objectivity*. As we have seen in section 1.4, life can only show itself as produced if it is developed out of objectivity. Hegel resolves the tension of organs by introducing sensibility (*Sensibilität*) and irritability (*Irritabilität*). Sensibility, roughly, is that which unifies externalities into a soul:

“Die Sensibilität kann somit als das Daseyn der in sich seyende Seele betrachtet werden, da sie alle Aeusserlichkeit in sich aufnimmt, dieselbe aber in die vollkommene Einfachheit der sich gleichen Allgemeinheit zurückführt.”²⁷⁵

On the other hand, irritability is that aspect of life which opposes itself to objectivity. It is that aspect which shows the objectivity as an external that *can be overcome* and in doing so makes the living being dependent on an externality. Sensibility strives to determine itself by means of the objectivity but cannot produce the objectivity as something that is external to it. It is this requirement, however, which introduces the finitude (*Verendlichkeit*) of the living individual.²⁷⁶ It is the unity of sensibility and irritability which Hegel calls reproduction (*Reproduction*) and which helps us to understand how organs gain their difference.²⁷⁷ Organs are organs with regards to the way in which they help produce the living being from the objective world.²⁷⁸ The different ways in which specific organs help actualize the object with regards to the living being describe their functions and determine them as different. For example, a stomach takes in the world in way that is different from that of the eye. In this way the Notion can be maintained internally through its organs. Yet, by doing so we immediately find that the living individual needs to relate to an external objective world.²⁷⁹

This brings us to the next section: *the process of living*. In this section, Hegel explores the relation between the living being and the external world which is a requirement for the living being. The *inner* structure of a living being requires a structured relation to an *outside* world. The living being requires a *reflection* in the objective world.²⁸⁰ It has a “drive” (*Trieb*) to sublimate the objective world which needs to be *for* the living being.²⁸¹ Here we find ourselves with another problem: the external object can only be external in so far as it is not already a living being.²⁸² The living being requires an opposition that is not yet incorporated. Thus, the determination of the external world as something that needs to oppose the living being means that the drive of the living being is characterized by *pain*: unfulfilled drive. It is the contradiction between the world that is necessarily external to the

²⁷⁵ “Soul” means “characterized by the Notion” here. I will return to this in the next section. Hegel, *WL II*, 12:185.

²⁷⁶ This finitude is of course relevant for the later transition to death. Hegel, 12:186.

²⁷⁷ Lindquist clarifies that we should read “reproduction” here as “self-maintenance”. It is the living being that sustains itself through its organs. Lindquist, ‘Hegel’s “Idea of Life” and Internal Purposiveness’, 388.

²⁷⁸ Lakebrink also emphasizes the importance of objectivity in understanding sensibility and irritability. Lakebrink, *Kommentar zu Hegels ‘Logik’ in seiner ‘Enzyklopädie’ von 1830*, 241.

²⁷⁹ Hegel writes: ““Mit der Reproduction als dem Momente der Einzelheit, setzt sich das Lebendige als *wirkliche* Individualität, ein sich auf beziehendes Fürsichsein; ist aber zugleich *reelle Beziehung nach Aussen*; die Reflexion der Besonderheit oder Irritabilität gegen ein Anderes, gegen die *objective* Welt.” Hegel, *WL II*, 12:186.

²⁸⁰ Hegel, 12:187.

²⁸¹ Hegel states: “[Das Lebendige seiner, RR] Trieb ist das Bedürfniß, diß Andersseyn aufzuheben, und sich die Wahrheit jener Gewißheit zu geben.” Hegel, 12:187.

²⁸² I do not go into the nuances of, for example, feeding on prey here. I will assume, for now, that such an account relies on the objective characteristics of the prey (for example the fact that it contains proteins and fats). Going beyond that means going beyond life and towards recognition. Procreation relies on the process described here.

living being and needs to be united with it. It is here that we return to the step from external teleology to life. We have already seen that the categories of Objectivity cannot be maintained by themselves. This means that the objective world cannot be maintained as purely separated from the living being either. The objective world cannot be a symmetrical (*gleichgültige*) opposition to the living being. By coming into contact with the living being it does not fully “objectify” the living being again.

“Insofern das Object gegen das Lebendige zunächst al sein gleichgültiges Aeusserliches ist, kann es mechanisch auf dasselbe einwirken; so aber wirkt es nicht als auf ein Lebendiges; insofern es sich zu diesem verhält, wirkt es nicht als Ursache, sondern *erregt* es.”²⁸³

It is here that we return to how I started this section. The world *for* a living being is no longer merely external: it is an environment.²⁸⁴ The world consists of food for the living being that is driven by hunger. The world consists of visible things for the living being that can see. It is the nature of the objective that it can *necessarily* be appropriated by the living being. This does not mean that the living being is some unrelated form of being which unexplainably turns non-living objects into living objects. This would be the case if the object and the living being were governed by utterly irreducible and *indifferent* logical forms. No, the living being can interact with the non-living object because the living being *has incorporated* mechanical and chemical objects. Thus, there can be mechanical and chemical reactions between the objects. Think, for example, of glucose being chemically changed into ATP within most living beings. Yet, it is mechanical and chemical interactions between the external world and internal objectivity which is characterized by internal teleology of the living being. Glucose is not merely chemically converted, it plays its part in the process of nutrition of the living being.²⁸⁵ It is in this sense that the living “objectifies itself”: it characterizes the very nature of objectivity both outside and inside of itself and thereby retains objectivity.²⁸⁶ In this way Hegel returns to the internal structure of the organism. The organs transcend mere objectivity by actualizing the potential to be incorporated of the merely objective world. They actualize themselves as organs by actualizing the potential of the world to become organs. Hegel writes:

“Das Mechanische und Chemische des Processes ist ein Beginnen der Auflösung des Lebendigen. Da das Leben die Wahrheit dieser Prozesse, hiemit als Lebendiges die Existenz

²⁸³ Hegel, *WL II*, 12:188.

²⁸⁴ The section on the process of the living being is quite complex, despite being only a few pages long. Lindquist gives an excellent treatment of this section in terms of “environment”, complete with a number of examples. Unfortunately, he mostly skips over Hegel’s usage of “pain” and “lack” which are necessary if we are to understand the importance of the objective for the living being. Khurana explains these in some detail. Khurana also couples the assimilation of the objective to the production of tools. I think this is, in a way, correct but somewhat premature. True tools belong to the self-conscious being. Lastly, Ng has a very short part on assimilation in one of her texts, which she, I think correctly, connects to Thompson’s “wider context”. Ng uses Thompson’s wider context to connect the section on the process of the living being to the section on the genus. Lindquist, ‘Hegel’s “Idea of Life” and Internal Purposiveness’, 390–95; Thomas Khurana, ‘Life and Autonomy: Forms of Self-Determination in Kant and Hegel’, in *The Freedom of Life: Hegelian Perspectives*, ed. Thomas Khurana (August Verlag, 2013), 177–79; Karen Ng, ‘From Actuality to Concept in Hegel’s Logic’, ed. Dean Moyar, 6 June 2017, 30–31, <https://doi.org/10.1093/oxfordhb/9780199355228.013.13>.

²⁸⁵ Ferrarin seems to make a similar point when he writes: “Digestion would not be thinkable without a reference to the subject’s inner constitution and chemical activity, which is able to work over externality insofar as it produces its own receptivity out of itself.” Ferrarin, *Hegel and Aristotle*, 222.

²⁸⁶ Hegel, *E*, 20:§219.

dieser Wahrheit und die Macht derselben ist, greift es über sie über, durchdringt sie als ihre Allgemeinheit, und ihr Product ist durch dasselbe vollkommen bestimmt.“²⁸⁷

It is this universality which the living being possesses which extends beyond the mere individual and into the external world. It is the structure of the *life-form*. It is the life-form which structures the objective world which can be actualized in a certain way by a certain life form (i.e. how the world is *for it*).²⁸⁸ It is the universality of the life-form by which we understand the self-maintenance and assimilation as sustaining a concrete being.

Thus, we come to *genus*. We have shown that the individual life form needs to be opposed to an objective world. These two are then unified by means of the genus. This is no coincidence. At this point we have shown *how* an existing living individual needs to be understood, but we have not shown *why* we could think that there was living individual at all. What we require is showing the interrelation between the universal life-form (the genus) and the individual living being, that shows the necessary diremption of the living being and the object. We need to show how a living being *comes to be*. This is what we see in the genus. For the living being to exist it needs the universal structure of the genus, and for the genus to be actualized it requires living beings. The genus determines the relationship of living individuals of the same kind towards one another. Individuals produce other individuals *of the same genus*.²⁸⁹ In other words: living beings *procreate*.²⁹⁰ It is the universality of the genus that makes this possible. Because living individuals are unified by the genus, they can actualize more living beings like itself. In this way, we see how the living being is created: it is born from other living beings of the same kind. A parent creates a child.²⁹¹ Life was the first category of the Idea: it needs to show both its coherence with the Notion and its own creation. If this would work, then we should be able to see the Notion in the genus. The genus (universality) is split up (particularity) into living individuals (individuality) which produce it. Yet, the genus is not fully developed in the living individuals: it is a requirement for understanding how the living individuals are produced, but its own production is not shown. We do not see the actualization of the genus, we see an actualization of individuals.

“Denn der Keim des Lebendigen ist die vollständige Concretion der Individualität, in welcher aller seine verschiedenen Seiten, Eigenschaften und gegliederte Unterschiede in ihrer *ganzen Bestimmtheit* enthalten und die zunächst *imaterielle*, subjective Totalität unentwickelt, einfach und nichtsinnlich ist; der Keim ist so das ganze Lebendige in der innerlichen Form des Begriffe.“²⁹²

²⁸⁷ Hegel, *WL II*, 12:189.

²⁸⁸ This, at least, seems to be the step towards universality that Hegel wants to make when he discusses how the original separation of individual life and an opposing objectivity by life (of which the individual living being and externality are species) is sublated into universality. Hegel, 12:189.

²⁸⁹ It could be that my reading of Hegel is too Aristotelian. Lindquist tries to make an argument against such a reading. At the very least, I do not intend the simple downward causation against which Lindquist argues: the interrelation between life and non-living objects needs to acknowledge exactly *how* these levels are interrelated. The dialectic shows this interrelation properly, if a form of downward causation can accommodate the dialectic, then it would be viable. Lindquist, ‘Hegel’s “Idea of Life” and Internal Purposiveness’, 396–97, footnote 29.

²⁹⁰ Hegel, *WL II*, 12:191.

²⁹¹ In *E*, Hegel also explicitly connects the differentiation of the genus into the difference of the sexes. I purposefully do not go into this as it does not fit with, for example, current research on parthenogenesis (asexual reproduction in animals). The relationship between a parent and a child, however, needs to remain on such a view and is still a differentiation of individuals in light of the genus. Hegel, *E*, 20:220.

²⁹² Hegel, *WL II*, 12:191.

In recognizing what is actualized by the living individuals, the “seed of life”, we recognize that the living individuals fall short. The individuals produce one another “indifferently”: there is no development which remains actualized. The individuals are produced by other actualized individuals under the “immediate” genus. For example, cats give birth to kittens, who grow up to be cats, who give birth to kittens. The genus of cat does not, in this expression of individual cats, truly express the notion. Instead, what we find is continual repeat and (bad) infinity that does not actually manage to go beyond the finitude of its individuals.²⁹³ It is, in fact, only in their *death* that the living individuals manage to properly return to the genus. It is only then that they cease to be characterized by the finitude of their individuality. It is the death of the individual that marks the transition to *the possibility of the actualization of the universal as the Notion*. Hegel writes: “Der Tod der nur unmittelbaren einzelnen Lebendigkeit ist das *Hervorgehen des Geistes*.”²⁹⁴ Death is, thus, not merely reducible to life. It is the necessary moment by which life can be developed into something more.

Before we turn to an analysis of death, let us first return to the previous sections of this text. In section 1.3, we explicated three deficiencies of Rödl’s system:

1. There is an underdetermination of states and movement forms for a substance.
2. It is unclear how we can understand interaction and interference.
3. A substance form needs to show how a substance is actualized, but in an immediate unity it cannot.

In section 1.4, I argued that these deficiencies occurred because Rödl’s system was characterized by *mechanical objectivity*. I then followed Hegel’s account and tried to show that Rödl’s system required a temporal object that was characterized by *life*. Aristotle helped us to understand how life can be a logical principle that relates to an externality in different ways. Aristotle also helped us to see what it means for a living being to have organs which are dependent on an external world that is to be subsumed by the living being. Thompson gave us a clear way of how we could grasp the “wider context” of his natural-historical judgments: the life-form which is the nexus of vital movements and states. More importantly, the life-form was characterized by a lifecycle, which showed how the living beings were instantiated. Mulder expanded on this Thompson’s account, by proposing different levels of powers and making the possibility of determining its situation the defining characteristic of the living being. In determining their situations by means of their vital movements, the living beings, thus, also determine their next movements in this way. All of these views cohere quite closely with the Hegelian account that I have tried to sketch here, and we can use them to show that life does indeed resolve the deficiencies of Rödl’s system.

1. There is no underdetermination because there is a natural development of movement forms and states in the living being. Let us return to the example of the kitten which I used in section 2.2: being a kitten (state) is only that state because it will grow up (movement form) into an adult cat (state). We cannot make sense of the state of the kitten without recognizing that it will grow older and become an adult. Neither can we make sense of the adult cat unless we understand its development from the kitten. The lifecycle determines these states. A kitten could not grow *younger*. Moreover, it is the life-form which determines how the cat is to develop because it determines the proper

²⁹³ Hegel almost literally states this when he states that the genus is expressed by the individuals as “nur die Wiederholung und der unendliche Progreß, in welchem sie nicht aus der Endlichkeit ihrer Unmittelbarkeit heraustritt.” Hegel, 12:191.

²⁹⁴ Hegel, 12:191.

situation for the cat. Water was *indifferent* to the situation it was in and thus indifferent to the situation it would be in. For living beings, the situation is inherently tied to the life-form. For example, toad-eggs are hatched in gelatinous fibers. These develop into tadpoles, which need to be in the water. There they develop into toads, which are mostly terrestrial. This also means that the tadpoles need to develop legs in order for them to walk on land and procreate. Thompson's nexus is exactly what we require to overcome underdetermination. Of course, living beings do not necessarily follow their lifecycle. A frog that is placed into a fire will not procreate. It will *die*. This brings us to the next point.

2. In CT, the substances are characterized solely by their *substance form*. The differences between substances, thus, also needs to be characterized by means of substance form. An *interaction* is thus difficult to grasp: in as far as two substances interact, they need to have a principle by which that interaction can be understood. However, because any principle of change requires a movement form and movement forms are dependent on substance forms, this means that an interaction can only be understood when united into a single substance. Such a change would then cease to be an interaction. We might try to resolve this by opting to introduce dyadic states and movement forms. Yet, without a proper dialectical framework, such solutions remain *ad hoc*: what is ultimately the difference between a monadic change and a dyadic interaction except for pure stipulation? Merely stating that one is monadic and the other dyadic does not seem to suffice. Not once we consider that the movement form is *the very thing* that brings unity to a substance on which a dyad is supposed to rely.²⁹⁵ Life resolves this because it has an actual principle of externality: the objective world is inherently different from the living being. They form two different levels. Moreover, this difference is crucial to both. Mechanical change requires the capacity to determine the mechanical object, but this determination remains external to it. Chemical change means that we end up with different substances. It is only in light of the living being that we see how these changes can be concretely understood. The living being internalizes an external which is distinct from it, but inherently carries the potential to be internalized. Mechanical and chemical interactions need to be part of the "wider context". Life shows how. Aristotle and the vitalists see the need for life but lack the dialectic which shows the true relation between the living being and objectivity.

Similarly, defining an *interference* becomes very difficult for a substance in CT. A substance is *indifferent* to its situation. It will merely be determined by it. Already, this makes an interference difficult to comprehend: an interference means that there is some way in which a substance *ought to change*. Yet, the substance in CT has no characteristic development. It is only in the living being that things can go wrong. A dandelion might dry out. A lion might fail to produce cubs. The living being can have a relation to the objective world that is *improper* to it and in this way the world or its own organs fail it. This failure, I will argue briefly in the next section, relies on the difference between levels: objectivity might be improper for life and thus interfere with life. A proper understanding of "interference" requires a proper understanding of "proper". The normative interaction between the world and a being requires life. It is this normativity that is tied up with the substance's capacity to sustain itself. This brings us to the last point.

3. Lastly, the substance in CT cannot show how it has come into being. Similar to the last problem, we want to understand the temporal limits of an object of thought. However, the substance form, in the way in which Rödl describes it in CT, can only characterize the substance in as far as it is *already actualized*. It is this immediate unity that was one of the main reasons to relate Rödl's system to Hegel's category of mechanism. It is this problem that gets resolved naturally by the category of life.

²⁹⁵ I also discuss this problem in footnote 93 of this text.

Thompson and Mulder do an excellent job in discussing the universal nexus of the living being as a “lifecycle”. If a living being completely actualizes the lifecycle, then it will procreate. It is the very component of procreation which makes a lifecycle into a *lifecycle*. Procreation shows how a living individual comes into being. It shows a temporal limit of that being. This temporal limit is not externally imposed but is an inherent part of the lifecycle that characterizes the living individual. The lifecycle *connects* its individuals and shows their actualization to be due to that connection. The nexus of the lifecycle has its own internal temporality: the very universal that governs the living being comes with an inherent temporal and normative aspect that permeates all of its determinations. Kittens grow up to be cats. The beats of the heart pumps blood to the lungs where the blood is oxygenated and returns to the heart. We might call this form of temporality the *lifetime*.

Thus, life does indeed resolve the deficiencies of Rödl’s system to some degree. Yet, it does not completely do so. We want to understand how changes in the living being cohere. Understanding this, however, requires us to understand that they are united by the normativity that is characteristic of a genus. This normativity relies on a relation between the living being and objectivity. Objectivity does not always “suitably” relate to a certain living being. For example, hot plasma is not a proper form of nutrition for a frog. This includes objectivity within the living being (e.g., disease). Some non-living objects can thus be unsuitable to life. This means that objectivity, the lower level of being, can interfere with the proper development of the living being. The frog dies because of the fire. Although the category of life gives us the production of an individual living being, and thereby one temporal limit, it does not provide its end. A lifetime comes to an end. The end of the living being is death. Death is not part of the lifecycle: it is a failure on the level of objectivity to sustain the living being. If we are to understand the object of thought, then we need to understand death. Death is the requirement for actualization of life through objectivity. Death leads the dialectic beyond the imperfect relation between the genus and the living individual to one of self-conscious *recognition* (*Erkennen*).²⁹⁶ Death is the requirement for the Idea. We need death to understand how objects of thought can be temporal. We have now done the preliminary work for an analysis of death.

2.4 Death

Death has been shown to be a necessary moment in the dialectic. It is that immanent deficiency of life by which it manages to go beyond itself. This is what we required for a proper metaphysics of death. Before we turn to Hegel, however, let us first turn to Aristotle. In DA, Aristotle uses the word “soul” when he discusses the principle of life. The soul, for Aristotle, is that which informs matter in living beings. This soul, as we have seen, is characterized by a nested hierarchy. The rational soul contains the sensible soul. The sensible soul the nutritive soul. Lastly, it is the rational thinker that can actually think this *scala naturae* and understand the ordering of soul. Because of this, Matthias Haase writes:

“[T]he series [of the tree different souls, RR] so conceived is a *hierarchy* of ‘higher’ and ‘lower’ ways of being alive. As the species *thinker* contains the whole series of kinds of living beings, it is the most ‘complete’ or ‘fully developed’ realization of the genus *living being* or *organism*. And insofar as *plant* and *mere animal* are species of the genus that includes *rational animal* they are, by the same token, ‘incomplete’ or ‘not fully developed’ in the light of the concept that belongs to the definition of what they are: *living being*.”²⁹⁷

²⁹⁶ Hegel, *WL II*, 12:192.

²⁹⁷ Haase, ‘Life and Mind’, 106.

After developing the category of life in WL, Hegel wants to describe a similar hierarchy of living beings in the second part of E, which contains the philosophy of nature (*Naturphilosophie*).²⁹⁸ We must turn to this part of E for our analysis of death. To see why the turn to this hierarchy of life is necessary, we should consider how Hegel uses the term “soul” (*Seele*). Hegel states that the Idea is: “die Einheit des Ideellen und Reellen, des Endlichen und Unendlichen, der Seele und des Leibs”. Soul is then explicitly linked to the Notion:

“Der Begriff ist so zwar *Seele*, aber die Seele ist in der Weise eines *unmittelbaren*, d.h. ihre Bestimmtheit ist nicht als sie selbst, sie hat sich nicht als Seele erfaßt, nicht in ihr selbste ihre objective Realität; der Begriff ist als eine Seele, die noch nicht *seelenvoll* ist.”²⁹⁹

Soul is, thus, only properly manifested in so far as it shows how the Notion is actualized in objectivity. If this is not the case, then the body and soul can be separate. It is here that we come upon death:

“der Mensch, das Lebendige, ist todt, wenn Seele und Leibe sich an ihm trennen; die todte Natur, die mechanische und chemische Welt, wenn nemlich das Todte für die unorganische Welt genommen wird, sonst Hätte es gar kein positive Bedeutung, - die todte Natur, also, wenn sie in ihren Begriff und ihre Realität geschieden wird, ist nichts als die subjective Abstraction einer gedachten Form und einer formlosen Materie. Der Geist, der nicht Idee, Einheits des Begriffs selbst mit sich, - der Begriff [wäre], der den Begriff selbst zu seiner Realitiät hätte, wäre der todte, geistlose Geist, ein materielles Object.”³⁰⁰

Life is characterized by the unity of a body and a soul. This is similar to what we saw in DA: something is a soul in as far as it is made concrete. Hegel adds to this that what this means is that the body needs to inherently express the Notion in its form of life. What I will do in the remainder of this section is give a brief sketch of the different forms of life that Hegel explores in E, and how they are connected by death.

The first form of life is the *vegetative nature* (*Die vegetabilische Natur*).³⁰¹ The vegetative organism is characterized by *immediacy*. Like the Aristotelian plant, it nourishes on an external world, grows and procreates. As an example, we can cut off a part of a plant and plant it in the ground.³⁰² This part will then continue to grow. This means that there is no inherent difference between a plant that grows and a plant that produces more plants. Moreover, because relating to an external (feeding) is immediately growing, this means that the three sections that concern life are immediately unified.³⁰³ Feeding is sustaining is procreating. A plant, thus, only seems to have different organs: they can adapt to other circumstances. There is only one organ in the plant. That by which it immediately performs all its life functions. Hegel writes:

“In der Pflanze, der *nur erst unmittelbaren* subjectiven Lebendigkeit, ist der objective Organismus und die Subjectivität desselben noch unmittelbar identisch, wodurch der Proceß der Gliederung und der Selbsterhaltung des vegetabilischen Subjects ein Außersichkommen und Zerfallen in mehrere Individuen ist, für welche das Eine ganze Individuum mehr nur der

²⁹⁸ Hegel and Petry, *Philosophy of Nature*, 1:21–40.

²⁹⁹ Hegel, *WL II*, 12:177.

³⁰⁰ Hegel, 12:175.

³⁰¹ I will not discuss the “geological nature”, it does not seem to contribute to our understanding of death. A moon does not die.

³⁰² Mitchell provides us with an in depth reading of how we should understand plant life in this chapter. He also relates Hegel’s account of life to Goethe’s and Schelling’s. Andrew J. Mitchell, ‘The Botany of Romanticism: Plants and the Exposition of Life’, *Comparative and Continental Philosophy* 8, no. 3 (2016): 315–28.

³⁰³ Hegel, *E*, 20:§346–348.

Boden als subjective Einheit von Gliedern ist; der Theil, die Knospe, Zweig u.s.f. ist auch die ganze Pflanze. Ferner ist deswegen die *Differenz der organischen Theile* nur ein oberflächliche *Metamorphose*, und der ein kann leicht in die Function des andern übergehen."³⁰⁴

This means that the plant lacks the capacity to be a discrete individual. It is only alive in as far as it can be understood to turn more continuous external world into plant. A plant has only produced plant in as far as the new plant produces plant, and so on. In as far as it cannot do this, the plant has died. The plant thus has an immediate lifetime: it is only plant in as far as it is fully actualized in its production of plant and it ceases to be plant if it fails to do produce more plant. It has then reverted back to objectivity. Yet, there is no inherent way by which this distinction can be made because the plants are continuous.³⁰⁵ For the plant, life and death permeate one another because it does not properly exhibit the Notion.³⁰⁶ What we require is a discreteness of being that plant cannot offer. It is only once it flowers that the plant goes beyond the mere immediacy: in flowering it expresses an organ that is opposed to another organ in sexual differentiation. The flower is the death of the plant because it has become the animal.³⁰⁷

Thus, we come to the *animal organism (Der Thierische Organismus)*. Unlike the plant, the animal is characterized by discrete opposition. Rödl aptly states:

“The heightened individuality of the animal resides in this, that it relates in its life activity to individuals as individuals. It is *an individual toward individuals*.”³⁰⁸

As in the Aristotelian case, this means that the animal can have a desire towards objects without having yet consumed them. It can grasp the external as an external without internalizing it completely and it grasps the external as consisting of individuals. The animal desires, perceives and feeds on individuals.³⁰⁹ Yet, there is a hierarchy here: desire exists because it *is possible* for the animal to consume that which it desires. Similarly, the animal has all the vital aspects which we discussed in the previous section as distinct capacities.³¹⁰ The growth of an animal is the growth of an individual and is not procreation. Similarly, in desiring the world external to it, the animal does not immediately either grow or procreate. Lastly, an animal will have different and *distinct* organs which can determine one another.³¹¹ Hegel also brings up a new aspect of life for the animal: disease. Hegel writes: “In der Krankheit ist das Thier mit einer unorganischen Potenz verwickelt und in einem seiner

³⁰⁴ Hegel, 20:§343.

³⁰⁵ Haase’s text on the different form of living beings has been extremely influential on this entire chapter. He also provides us with an excellent reading of how the capacities of the plant “fall together” in much more detail than I do here. Lindquist gives a good explanation of continuity. Haase, ‘The Social Nature of Thinking’, 16–21; Lindquist, ‘Hegel’s “Idea of Life” and Internal Purposiveness’, 386.

³⁰⁶ I do not go into the details here of what the vegetative form of life would concretely look like. There seem to be a number of problems. For one, we cannot just cut off any part of the plant and expect it to be a new, flourishing organism. I think that maybe these issues can be resolved, but I do not intend to do so here.

³⁰⁷ Mitchell writes: “The plant dies with flowering and it will be left to another organism, the animal, to take up this contact with the other, along with the self-relation that it presupposes.” Mitchell, ‘The Botany of Romanticism: Plants and the Exposition of Life’, 321.

³⁰⁸ Rödl is not concerned with death in this text. Rödl, ‘Education and Autonomy’, 89.

³⁰⁹ See Boyle for a small explication of why even Venus Flytraps are ultimately not eating flies, but mere continuous flows of nutrients. The plant can have no prey. Matthew Boyle, ‘Essentially Rational Animals’, *Rethinking Epistemology* 2 (2012): 395–428.

³¹⁰ Haase, ‘The Social Nature of Thinking’, 23–26.

³¹¹ Ferrini shows the development in this section in more detail and also places scientific claims into their historical context. Cinzia Ferrini, ‘From Geological to Animal Nature in Hegel’s Idea of Life’, *Hegel-Studien* 44 (2009): 45–94.

besondern Systeme oder Organe gegen die Einheit seiner Lebendigkeit festgehalten.”³¹² What does this mean? The animal lives because it actualizes the potential of objectivity to be alive. The fact that objectivity can be overcome by the individual animal also means that objectivity can overcome the animal. In effect, these levels are in a state of constant struggle:

“Die unorganische Natur, welche von dem Lebendigen unterworfen wird, erleidet dies um deswillen, weil sie *an sich* dasselbe ist, was das Leben *für sich* ist. Das Lebendige geht so im Anderen nur mit sich selbst zusammen. Wenn die Seele aus dem Leibe entflohen ist, so beginnen die elementarischen Mächte der Objektivität ihr Spiel. Diese Mächte sind sozusagen fortwährend auf dem Sprunge, ihren Prozeß im organischen Leibe zu beginnen, und das Leben ist der beständige Kampf dagegen”³¹³

Disease is when one of the organs of the animal fails to overcome its struggle against the inorganic. The animal needs its organs. If one fails, it can either be “healed” by means of the other organs, or the organism degenerates and cannot live on.

This brings us to the last part of the chapter on the animal: the death of the animal. As we have seen, it is in the very nature of the animal to be an individual. In this sense it does not actualize the genus, all it actualizes is “the seed of life”. It is this very discrepancy between the living animal and its universal genus, however, which is the ultimate cause of its disease and its death. The animal does not properly unify objectivity with the Notion. Hegel writes:

“[Das Thier] seine Unangemessenheit zur Allgemeinheit ist seine *ursprüngliche Krankheit* und [der] angeborne *Keim des Todes*. Das Aufheben dieser Unangemessenheit ist selbst das Vollstrecken dieses Schicksals.”³¹⁴

What we thought was the principle by which the animal was kept alive is actually its undoing. This principle is the *seed of death* that is contained in the animal. Yet, in its undoing, it is sublated into *Geist*. The death of the animal forms the end of the philosophy of nature and the start of the self-conscious being. This is both the case in WL, where death leads consciousness to try and objectify another consciousness, as in E, where it is part of the Philosophy of Spirit (*Philosophie des Geistes*). Death is the seed from which self-consciousness grows.

I will not discuss the self-conscious being in detail here. Yet, a few preliminary, and speculative, observations seem important. At the end of the chapter on the animal, Hegel states that, by dying, the animal returns to the universal. It is this unification that opens up the way for the Notion to actualize itself in an objectivity that can actualize the Notion by grasping it: self-consciousness. Hegel calls this process “*der Tod der Natürlichen*”.³¹⁵ It now makes sense that we speak of “death of nature”, if we consider what characterizes self-conscious beings: culture. Culture is no longer mere nature; it is *second nature*.³¹⁶ It is how the self-conscious entities change themselves and the world in

³¹² Hegel, *E*, 20:§374.

³¹³ This quote comes from one of Hegel’s additions that is not in the other source of E that I use. Georg Wilhelm Friedrich Hegel, *Enzyklopädie der philosophischen Wissenschaften I*, ed. Eva Moldenhauer and Karl Markus Michel, G.W.F. Hegel: Werke II. Electronic Edition (Charlottesville, Va.: InteLex Corporation, 2003), §219Z, http://pm.nlx.com/xtf/view?docId=hegel_de/hegel_de.08.xml.

³¹⁴ Hegel, *E*, 20:§375.

³¹⁵ Hegel, 20:§376.

³¹⁶ Khurana goes into the importance of second nature and the parallels between *conscious* and *self-conscious* life. Ng goes into their tension with regards to ideology. Khurana, ‘Life and Autonomy: Forms of Self-Determination in Kant and Hegel’, 181–93; Karen Ng, ‘Ideology Critique from Hegel and Marx to Critical Theory’, *Constellations* 22, no. 3 (2015): 393–404.

which they live through work. If we think of dying as the separation of the soul and the proper body, then we see that a culture does not die when its individuals do. Culture has a soul that is not bound to individuals: a world-soul. The individuals within a culture *play their part*, like organs in the body, and develop the culture (i.g., citizens in a state). Unlike the bad infinity of the genus, the Notion actually sees a development in its actualization in this way: a culture grasps the Notion that governs it and thereby *self-consciously* actualizes it.

A culture also changes the deaths of individuals and changes their nature. Whether it is the struggle to the death that leads to the feudal system, the transferal of the fallen soldier to the family by the state or the birth of Christ, death always is a crucial aspect in which Hegel has a culture resolve tension between its extremes.³¹⁷ It is in this development of the thinking soul that we return to our project. We have established how the world is *thinkable* because we are at the right time. Culture has its own form of time: history. History is that form of time in which self-conscious beings develop themselves and concretely expand their capacities. A hundred years ago, we had no internet to connect people around the globe. Diseases that killed us 500 years ago can be cured today. Genetic modification, IVF and birth control have even changed the way in which we procreate as a species. Death itself has a changing role in history. Perhaps Ivan Ilyich's fear of death would not have been so grand if he would not have been so alone. Indeed, it is his reciprocal embrace of Gerasim's compassion that finally offers him solace. Theirs is the start of a culture.

I would like to end this section by emphasizing the great importance of the metaphor of the seed of death. On the one hand, death is what we find in the non-living objectivity. It is that objectivity which cannot grasp the Notion. Yet, as we have seen, it is this objectivity which necessarily underlies life. The structure of thought, like the active intellect, is deathless. Yet, thinking is done by perishable thinkers. Thinking is hierarchically dependent on perception, perception on consuming and consuming on mechanical and chemical objectivity. As we have seen, the animal cannot overcome the struggle with its inorganic nature and ultimately dies alone. We, self-conscious beings, can become better at overcoming the lower levels within us, yet they remain necessarily within us. This means that we can die. Stephen Houlgate writes: "What is absolutely necessary in this world of contingency, therefore, is negation, destruction, and death."³¹⁸ We are reliant on a lower level of being, which is less concrete and can be overcome by contingent situations spelling the end of our existence. This is one way in which the seed of death is within us. Houlgate provides us with a striking example: "The fact that human beings necessarily develop a consciousness of freedom through being the free beings they are thus cannot prevent an asteroid from crashing into the earth and eradicating human life."³¹⁹ On the other hand, the possibility of death is exactly what drives forward the dialectic. We could not understand non-living objectivity because it could not determine the conditions of its destruction. Plants were undetermined because their life and their death could only be subjectively applied. In animals, it was the separation of the genus and the living individual which implied death, but which also carried the seed by which the development to the self-conscious being could be made. It is this double role of death as the seed which is crucial for a further research of death. We should not reduce death to any single level of being. Instead, death is what mediates between these levels.

³¹⁷ Brent Adkins analyzes the social dimensions of death in great detail. Although his reading is at times very psychoanalytical, it is nonetheless one of the best sources on this topic. Brent Adkins, *Death and Desire in Hegel, Heidegger and Deleuze* (Edinburgh University Press, 2007), 75–122.

³¹⁸ Stephen Houlgate, 'Necessity and Contingency in Hegel's Science of Logic', *The Owl of Minerva* 27, no. 1 (1995): 46.

³¹⁹ Houlgate, 49.

Conclusion

The aim of this text was to gain a systematically relevant introduction to the metaphysics of death. As it stands, we have only achieved a brief sketch of what death is supposed to look like. What is important, however, is the preliminary work which we have done in order to get to this point. We could have easily started off by collecting our intuitions about death and trying to fit them into a coherent model. This model could then have been open to counterexamples, updated and again criticized. It is this philosophical cycle, however, which I have been striving to avoid in this text. Such an approach often remains wrought with dogmatic assumptions that shape and subvert how we think of death. If we want to engage properly with death, we required a dialectical metaphysics.

In the first chapter, we started by looking at Rödl's CT. Rödl engages with the complex questions that lie at the heart of metaphysics. Before we can turn to the question of what death is, we need to know what truth is. As we have seen, truth resides in facts. Logic researches the form by which categories can be unified into facts. It is the categories which have a meaning solely with regards to the *form of being*. These categories also determine the *form of thought*, because the form of being is the form of thought. It is also these categories which are the requirement for a further understanding of metaphysics: in as far as something can be said to *be* it *is* in as far as it is grasped by these categories. This showed it would be a mistake to assume the validity of Frege's logic in building a metaphysical model of death. If we would have accepted Frege's logic, then we would have already assumed that the same logical categories by which we could capture the non-living being would also apply to the living being. This would have been fine if Frege's logic would indeed be the proper logic for metaphysics. As it turns out, however, Frege's logic cannot be used to grasp metaphysics by itself. Rödl shows that Frege's logic cannot be sustained as a *metaphysical* logic because it fails to provide its own object. Instead, Rödl develops his own metaphysical logic which is inherently *temporal*.

As we have seen, Rödl's temporal system is quite good. *Tensed*, *aspectual* and *generic* thoughts can form the basis for a temporal system once properly united. Yet, his account of the unity of substance and substance form in *form thoughts* cannot live up to this requirement. It cannot properly incorporate *externality*. In Rödl's system, states were external to other states. Substances to other substances. Substance forms to the temporal limits of substances. All of these externalities led to their own problems. Yet, temporal limits are a requirement for an understanding of death. In order to find a way to resolve the deficiencies of Rödl's temporal system, we turned to Hegel's WL. Here, we saw that the true problem of Rödl's system was akin to the problems of Hegel's category of *mechanism*: a category of objects whose determination is external to themselves. This meant that we could use the *dialectical development* of mechanism to resolve the deficiencies of Rödl's system. Mechanism led to *chemism*: objects that determined each other. Chemism led to *external teleology*: objects relate to objects in a means-end relationship. The conclusion of this first chapter was that the object of thought needs to be *alive*. It is sensible to incorporate life into an analysis of death. Yet, we could not have started our investigation of death without the developments of this chapter. We needed to show that the very nature of being itself led to life by developing objectivity. If death is the breakdown of life, then we need to know to what life is broken down. We need to have a proper grasp of objectivity. This chapter has shown that thought needs to be temporal and that temporal non-living beings necessarily have the *potential* to develop into living beings.

In the second chapter, we turned to logical form of life. Hegel's account of life in WL is quite complex. In order to understand it, we first turned to Aristotle's DA. In DA, Aristotle showed that there are three types of souls which are hierarchically nested: the *nutritive*, *sensible* and *rational* soul. These three different souls instantiate three different kinds of relations towards an external world. The

nutritive soul is characterized by a material internalization of the world: metabolism and procreation. Nutrients are actualized as being under the form of the living being. The sensible soul is characterized by the potential to actualize the form of its object. Moreover, it actualized the perceptible as perceived. Lastly, the rational soul consisted the interrelation between a deathless, active soul, which is the production of the possibility of forms, and a perishable, passive intellect, which could become these forms. These forms of life are the basis for Hegel's own forms of life in E. We then turned to a contemporary logical account of life as developed by Michael Thompson and Jesse Mulder. I characterized them as *vitalists*: thinkers who think that life has an irreducible logical form. I claimed that they made both a negative and a positive claim. The negative claim consisted of showing that the logical form of life is not reducible to non-life. The positive claim consisted of how such a positive account looked like. The positive account that the vitalists sketched was one in which a living being is a *nexus* of inter-determining powers in their relation to a proper *environment*. The living being also came with its own, internally temporal universal: the *lifecycle*. Both of these seemed correct. The problem of these claims, however, was that they could not substantiate the necessity of life. The irreducibility of life (i.e., the negative claim) might as well lead us to reject the claim that there is such a thing as life. Likewise, the positive claim merely tells us that we have an intuitively plausible model for life. Yet, that by itself does not mean that it is correct. We might have another intuition at a different time. What we require is the dialectical development which shows both *that* there needs to be life, and also *how* it looks like. The problem with both Aristotle and the vitalists is that they do not show the necessary development logical form of life from objectivity.

Thus, we returned to the Hegelian account of life. Life is the first category of the Idea. The Idea is the proper unity between the subjective Notion and the objective world. We have seen how objectivity was "inconcrete" in the sense that it necessarily developed into living beings. Objects could not show their own production. Living beings do. Hegel divided the chapter on life in three sections: the living individual, the process of living and the genus. The *living individual* was shown to sustain itself by its organs. The organs of the living individual, however, could not produce *one another* because there was nothing that properly separated them. It is only with the introduction of the external world that we can see how organs are differentiated. This was what Hegel described in his section on the *process of living*. Organs play different parts in producing the living being from objectivity. In this way, they reflect the dialectical development of the category of life itself. This incorporation of the external world can only happen, however, because the living individual has internalized objectivity: the organs of living beings are made up out of mechanical and chemical objects. It is the universal separation of an objective world that is *for* the living individual and the subjective living being that actualizes this potential of the world that is characteristic of *life*. This universal characterizes the *genus*. It is the genus which shows how living individuals come to be. Living individuals come from other living individuals of the same kind. This process of procreation is the actualization of the living individual: the seed of life. Because the genus is only actualized through the finite individuals, it also means that it is actualized imperfectly. The living individuals are only alive as long as they, manifest the Notion. Yet, because they are only actualized by other individuals, living individuals can always fall prey to objective interference. Living individuals die. There is an eventual end to their lifetime. It is this death that shows the separation of the universal genus and the living individual.

The last section consisted of a few tentative steps towards a metaphysics of death. We have seen that non-living objectivity is, simply, dead. It cannot show its own production and it does not develop itself. It remains utterly dependent on contingent externals. Plants are characterized by life in such an immediate sense which can only be subjectively distinguished from death. Animals have death because they are separated from their genus. It is here that we were introduced to the seed of death, which led to self-conscious life and culture. It is my proposal that death is best understood by

means of this seed: both showing the dependence of higher forms of being on lower forms in terms of objectivity and the relation of lower forms of being on higher forms in terms of subjectivity (i.e., the Notion). Death is not captured by any of these levels but mediates them. A full metaphysical account of death would require us to work out my proposal and see whether it holds up.

In this text, the question that I hoped to contribute to is: "What is the nature of death?" I have not contributed to this question by answering it in any more than a tentative fashion. There are still many interesting and pressing questions that have come up with the model of the ontological hierarchy that I have proposed. For example, could we consider certain diseases, such as cancer, to be a conflict between the vegetative and animal organism? Should we understand evil as a conflict between the self-conscious culture and the animal organism? Could we use my model to develop an ontological view of medical techniques and implants, in which we self-consciously change the contingent, but necessary, materials of our body? There are also some problems: how does the start of life fit into the Hegelian metaphysics?³²⁰ How should we conceive of the contingency by which objectivity can destroy life? I have not yet answered any of these.

Instead, what I have tried to do is show what it means to ask what the nature of death is. I have strived to overcome dogmatic assumptions that could subvert our analysis of death. In return I have tried to set out a dialectical path from which the analysis of death can commence. This is what I have hoped to achieve: not to have the final word on the nature of death but to show how such a final word can, one day, be accomplished. Thus, like the end of life, the end of this text is hopefully also a beginning.

A cleared ground and a planted seed.

³²⁰ Hegel seems to have misgivings about the notion that higher forms of being could come from lower beings. His resolution, as far as I understand it, is that the starting point is God who needs to actualize himself in the world which reaches its highest point in the return of Jesus Christ. This would be in line with his Pietism as described by Magee. In this sense, the starting point would be the highest and the problem would not exist in such a way. Many contemporary metaphysicians, however, would find such a claim dubious. Glenn Alexander Magee, *Hegel and the Hermetic Tradition* (Cornell University Press, 2008).

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