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To my teachers

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¹ It happened on multiple occasions that after telling people who my committee members are, I received the reply that this is a dream-team of a committee for working on Kant and Hegel.

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Introduction

The topic of this dissertation is the concept of nature. ‘Nature’ is here understood as containing everything that exists objectively. And while it is an empirical question what exactly exists objectively, all empirical inquiries into what exists presuppose the concept of nature as the totality of what exists—whatever it may be—or as the structure¹ of what there is. Hence, the concept of nature is not an empirical concept, but an a priori concept. One goal of this dissertation is to inquire into the shape of philosophical arguments regarding the a priori concept of nature. Thus, this dissertation is more specifically devoted to how Kant and Hegel, as two paradigmatic philosophers of the a priori, argue for their respective conception of nature.

The a priori investigation I am interested in is traditionally called metaphysics. There is an interesting continuity, important differences notwithstanding, running from Aristotle’s *Metaphysics* through Descartes’ *Prima Philosophia* to what Kant calls the a priori—one which, in turn, undergoes further development in one way in Hegel’s *Science of Logic*, and in another in Wittgenstein’s *Tractatus* and *Philosophical Investigations*. I take this dissertation to address issues pertinent to metaphysics or first philosophy as it is sketched in this historical sequence. A common theme of the metaphysics or first philosophy of these thinkers is the way in which thinking and being are one.² Kant argues for such a unity insofar as he argues for an a priori conception of nature on the basis of a reflection on how experience is possible. This reflection yields that the content of thought must be given through the senses, and that concepts that have no relation to experience whatsoever are mere flights of fancy, concepts of which it is not clear whether they have content at all. A central theme of

¹ I do not mean “structure” here in a sense where the structure in question is external to the elements structured.

² For a more extensive discussion of this theme, cf. Kimhi 2018.

this dissertation is that we can get into view what Kant calls “real metaphysics”³ through the contrast to Transcendental Realism, which conceives of metaphysics on the model of empirical, theoretical cognition. Hegel radicalizes Kant’s a priori method by cleaving to the ‘duality-yet-unity’ of the relation between thinking and sensing as it is endorsed by Kant, while shedding the distinctively intuitive aspect of that relation. The result is Hegel’s infamous ‘dialectical method’: Hegel determines thinking to essentially consist of a self-relation that involves ‘negativity’. Through this negative self-relation, dualities are created and ‘sublated’—similar to Kant’s positing of the understanding and sensibility as two separate stems of our capacity of cognition, all the while arguing for the essential unity of these two separate stems. Yet, Hegel takes this ‘positing which is part of thinking’s negative self-relation’ to occur not only regarding thinking and sensibility, but regarding all basic concepts of philosophy. While I seek to make these opaque claims more transparent in the course of this dissertation, what I want to say at this point is that it is in this way, by ‘internalizing’ the content-delivering aspect of sensibility into thinking, that Hegel seeks to go beyond Kant within the above sketched tradition of first philosophy.

The concept of nature is crucial for metaphysics. For, how capacious our conception of nature is will determine what we take to exist objectively. Does a person exist objectively? Or can we only say of the bodily aspects of a person that they exist objectively? Do plants and animals exist objectively, even though they exhibit a teleological structure, i.e., a structure that has no place in the paradigmatic modern science, physics? Depending on the conception of nature and objecthood that we bring to these questions, we will answer them differently. On a restrictive conception of nature, it will become puzzling how objects can exhibit features or aspects that do not accord with said conception. For

³ Cf. *MFNS*, Preface, IV:472; B786/A758; B316-8/A260-2; VIII:160. (I cite Kant by first stating the common abbreviation of the work, then, if apposite, the section, and then the volume in the Akademie-Ausgabe followed by the page-number after a colon. The only exception is the *Critique of Pure Reason*, which I cite in the canonical way through the page-numbers in the B- and A-edition.)

example, on a mechanistic conception of nature, the teleological aspects of organisms and the subjective aspects of persons, such as mental activity, will give rise to the question how a natural object can so much as have such aspects. Similarly, in the terminology from Wittgenstein's Blue Book,⁴ whether 'I as object' stands opposed to 'I as subject' or whether the one always already includes the other will depend on the concept of objecthood and nature employed. Finally, whether there is such a thing as human freedom depends on the concept of nature employed, as that concept settles what we take there to possibly be.

The issue of freedom's reality constitutes a central strand of this dissertation. Together with the issue of nature and its constituent, it is the central *material* issue that I address. Whereas the issue of how Kant and Hegel argue for their positions, i.e., the issue of philosophical method, constitutes the central *formal* issue of the dissertation.

Regarding the issue of freedom's reality, I first discuss—in chapter 1—how Kant argues for causation's being the fundamental, real relation between objects in nature, insofar as changes of the properties of objects must be caused by the activity of another object. If causation by an external object is *the* relation among natural objects, however, then freedom seems to be excluded from nature. For, it is plausible to hold that a person acts freely when her actions are determined by herself rather than from without. If everything in nature is determined by external causation, then it seems that predeterminism is true, i.e., the view that the future is fixed. Whatever anybody does or says in ten years is then fixed already now and even prior to their birth. I lay out—in chapter 2—how Kant argues that external causation does not exclude freedom. This is so, according to Kant, because external causation cannot sufficiently determine an event—which would have to be the case if freedom were positively excluded. In other words, if external causation were the only kind of causation, then external

⁴ *The Blue Book*: 66-74.

causation would have to be able to provide a sufficient reason for why an event occurs in the way it does. Yet, external causation cannot provide a sufficient reason, because it gives rise to an infinite regress rather than delivering a sufficient reason. Thereby, predeterminism is rejected and freedom is shown not to be excluded. Nevertheless, Kant is a determinist in the sense that he endorses that every event must have an external cause. In light of the reasoning laid out in chapter 2, Kant does not give up on the claim that external causation is fundamental to nature, but rather he argues that we have to reconsider how to understand the concept of nature. Nature is not a ‘given whole’, where the parts are present all at once—as if nature were a solid block of metal in front of us. Rather, the concept of nature as the totality of everything that exists *guides us* in our experience and scientific inquiries into what we can claim, on the basis of experience, to exist. That is, in experience and especially in science we *strive* towards a concept of nature in which everything is perfectly ordered according to external causation, yet we can never reach that point. For, that conception of nature is not real, not actual, but merely a *regulative ideal* or *idea*, in Kant’s technical sense of the term, as an imaginary endpoint of our activity of unifying what we experience.

Kant thinks that we naturally misunderstand the concept of nature. We do that when we take the concept of nature to be real, to be actual, rather than an idea. I lay out how this misunderstanding is an instance of ‘Transcendental Realism’, the position which Kant attributes to his early modern predecessors, and to which he opposes his own position, ‘Transcendental Idealism’. The question why exactly Kant calls his idealism *transcendental* is rarely directly addressed.⁵ I give a novel answer to that question and lay out the wide implications that this answer has. My answer consists in relating the

⁵ Two scholars one would directly associate with that question are Graham Bird and Henry Allison. However, Bird does not directly address this question. It can only be gleaned what his answer to that question would be from Bird 2006: 765. And Allison addresses this question only in one endnote in Allison 2004 (on p.20), and one has to combine what he writes there with his account of the distinction between “in uns” and “außer uns” in the transcendental sense at Allison 2004: 24 in order to glean his answer to said question.

terms Transcendental Realism and Transcendental Idealism to Kant's conception of 'transcendental cognition', which is the special kind of *philosophical knowledge* that Kant seeks to bring about in his three *Critiques*. I argue that Transcendental Realism consists in our modeling transcendental cognition on empirical cognition, whereas Transcendental Idealism consists in taking transcendental cognition to be 'purely rational', as Kant puts it, i.e., to be cognition that is only indirectly related to experience and comes about solely through reflection on the concepts that have to be in play in order for experience to be possible. We conceive of transcendental concepts such as space, time, or nature on the model of empirical cognition when we take these concepts to have 'objective reality' in the way that empirical concepts such as 'planet', 'duck', or 'chair' have objective reality, i.e., content and object-relatedness. Yet, space, time, or nature do not have their content through experience and they do not relate to an external, empirically given object. Rather, space and time are *the way in which* objects are given to us in experience, while nature is, as said above, the indeterminate totality of all objects and their interactions, whatever they turn out to be. This point can also be made by saying that space, time, and nature— notwithstanding their differences—are *formal* rather than *material* concepts, and that the natural illusion of Transcendental Realism consists in mistaking these formal concepts for material concepts. One major claim of this dissertation is that it is helpful to distinguish a formal from a material concept of nature, which are both formal when contrasted with empirical concepts, but where the *formal* concept of nature is *indeterminate* with respect to the question *how exactly* the objects of nature are unified, while the *material* concept of nature involves an answer to that question. I develop this claim in the course of chapters 1 to 3. As mentioned above, I seek to make the sustained argument in this dissertation that we can get "true metaphysics" or first philosophy into view through the contrast to Transcendental Realism. I argue, also in chapter 2, that this claim is tantamount to the claim that Kant's usage of "form" and "matter" is to be taken seriously, i.e., that Kant should be read hylomorphically.

That, for Kant, the concept of nature is an idea is also key to Kant's account of organisms, I argue (in chapter 3). Organisms are curious because they are in nature, yet they evidently do not only exhibit external causation, but also teleological causation: animals are brought about by other animals of their species *so as* to preserve that species, an individual animal nourishes itself *so as* to bring its temporal endurance about, and individual organs are brought about and maintained by the other organs so as to maintain their own existence and the existence of the animal in question. Teleological causation, however, has for Kant its proper home in practical reasoning, i.e., in reasoning as it pertains to human agency. That is, only with respect to practical reason can teleological causation be argued for in an a priori fashion. Organisms thus give rise to an antinomy, in which one party insists on the exclusivity of external causation for natural phenomena and where the other party does not want to give up on teleological causation's evident presence in organisms. Also this antinomy rests on mistaking the concept of nature for an empirical, material concept. For, once the formal nature of this concept is acknowledged, the conflict between external and teleological causation falls away. Yet, this antinomy involves the specificity of being an antinomy that arises with respect to concept-formation. For Kant, the goal of concept formation is the unity of appearances. Thus, the concept of nature involved in the antinomy about organisms is not just the concept of nature as a causally closed system, which is the concept that seems to conflict with freedom. In addition, the concept of nature involved in the antinomy about organisms contains the way in which nature can possibly be unified in a material way—it is the *material* concept of nature mentioned above. That is, the concept of nature involved does not merely state the indeterminate unity of whatever exists objectively, but also contains the way in which such a unity can possibly come about. According to Kant, nature can only possibly be materially unified by means of *mechanistic principles*. These are the principles of mechanistic physics, i.e., of the physics of matter in motion. This means that the antinomy arises when we think that nature can only contain objects that can be explained by means of mechanistic principles, because only by

means of mechanistic principles can nature ever be unified in a material, concrete way. The antinomy is overcome, I submit, when we recognize that also this material and mechanistic conception of nature is merely an idea. The result is that we must always strive to give mechanistic explanations of natural phenomena, yet other kinds of explanations—such as teleological explanations—are not excluded. For, when we see things correctly, we see that teleological explanations do not in fact contradict mechanical explanations, but rather stand to the latter as end to means or as form to matter.

After this detailed discussion of Kant's conception of nature, I turn to Hegel. My account of Kant's conception of nature evolved out of my attempts to pin down Hegel's criticism of Kant. The result of these attempts is that I found that Hegel often does not read Kant as charitably as it would be possible and, I think, desirable. While some criticisms that Hegel mounts against Kant address deeper issues, some seem to amount to outright strawmanning. For example, Hegel likes to describe Kant as a 'subjective idealist',⁶ according to whom we can only know appearances and not how things really are in themselves, and where this amounts to a skeptical position. Yet, Kant's phrase that we only know appearances and not things in themselves need not be read in a skeptical vein. Kant's usage of 'things in themselves' may, for one, not be univocal. And then, there are passages that indicate that the concept of a 'thing in itself' does not denote an empirical object as it really is, but rather the object of a purely rational cognition.⁷ The claims that Kant makes to the effect that there must a thing in itself that underlies appearances⁸ can thus be taken to be claims about the necessity of the purely rational cognition that transcendental cognition is, rather than to be claims about our incapability to cognize objects of experience as they really are, qua empirical objects. Differently put: the demand to cognize things 'in themselves' is a demand for fulfilling the demand of the principle of sufficient

⁶ Cf., e.g., *Faith and Knowledge*: 189 (TW 2:430), 68 (TW 2:33).

⁷ Cf. B769/A741; B381/A324.

⁸ Cf. Bxxvi-xxvii, B565/A537, B522-3/A494-5.

reason. Empirical cognition can never live up to this demand, because of the regress to which it then gives rise; but philosophical cognition can. In sum, reading Kant as endorsing an idealism à la Descartes or Berkeley is not necessary and not charitable. Kant's idealism is rather one that flows from the point that nobody can make a metaphysical claim about a topic to which she has no access. And this access, according to Kant, always involves experience—either directly or indirectly. To assert an immortal soul, the existence of God, predeterminism, or the necessity of uncaused causes thus amounts to idle speculation about concepts to which we have no access, and which can only be said to have content insofar as they are, in some way, necessary for experience.

Nevertheless, Hegel's criticism can be taken to address certain unclaritys in Kant. While it does not seem necessary to me to read Kant as being saddled with an unsurmountable dualism between the understanding and sensibility, Hegel's charge of a 'subjective idealism' can be understood as (Hegel's hyperbolically pointing out) Kant's *not having said enough* about *the unity of understanding and sensibility* that is needed for empirical cognition to be possible. Similarly, Hegel can be taken to criticize Kant for not having said enough about *how freedom can be real*. Even if we accept Kant's negative argument that external causation cannot be the only kind of causation or determination, we may still wonder how freedom can be concretely realized in nature, when external causation is taken to be the fundamental relation among natural objects. That is, when we accept Kant's negative argument, we may still stand in need of a positive account of freedom's reality. Hegel scholars from Herbert Marcuse to Terry Pinkard, James Kreines, and Karen Ng emphasize Hegel's interesting and intricate account of organisms. It is through an appreciation of *life* that we may thus come to see how freedom can be real.⁹ Yet, at least on my reading, already Kant gives a positive account of life. The problem from a Hegelian vantage point is that it is central to Kant's account of life that the concept of an organism is

⁹ For example, Ng writes: 'Hegel [...] aim[s] to demonstrate that the infinite activity of reason and freedom is immanent in nature and, more specifically, immanent in the activity characteristic of life.' (Ng 2020: 133.)

an *empirical* concept.¹⁰ But if the concept of an organism is an empirical concept, then it is a contingent fact that there are organisms. Is freedom’s reality—or at least our comprehension of it—then equally based on a contingent fact? Hegel’s *Science of Logic* promises to mend that shortcoming by giving an *a priori* argument for the form of thought and reality¹¹ that organisms exhibit.

Yet, the approach to give a positive account of freedom’s reality through Hegel’s account of life in the *SL* faces two central questions: 1) How is Hegel’s *a priori* argumentation for that form to be understood? 2) Hegel’s account of life centrally involves the claim that objects determined through external causation are ‘indifferent’ to being taken up into a higher form, such as the teleological form exhibited by organisms.¹² But how is this indifference to be understood? How is it possible? If predeterminism is right, then it is external causation that “runs the show”, while the teleological structure of organisms is to be considered as an indifferent addition that could also be absent. I address both questions—in chapter 4—by giving a detailed account of the Mechanism chapter in the *SL*. I argue that, in this chapter, Hegel takes up Kant’s negative argument against predeterminism and thereby establishes that external causation or determination cannot be the only kind of determination that there is. Hegel goes beyond Kant by asserting the reality of a contradiction within a narrowly mechanistic conception of nature, i.e., a conception of nature in which external determination is the only form of determination. This contradiction Hegel then *renders productive* by deriving from it a *higher form* of mechanism. He does this by means of the specific method of the *SL*. I lay out how this method works—thereby answering question 1) above—and how this method relies on “thinking alone”. The latter aspect of Hegel’s method contrasts with Kant’s, who argues by reflecting on the spatio-temporal

¹⁰ It is central to my reading of Kant on organisms that Kant establishes this in §74 of the *Critique of the Power of Judgment* and that the essential empiricity of the concept of an organism—or ‘natural purpose’—plays a key role in the resolution of the antinomy to which organisms give rise.

¹¹ The forms of thought discussed in the *SL* are at the same time forms of reality. For a helpful discussion of Hegel’s claim that logic, in Hegel’s sense, is metaphysics, cf. Pippin 2018.

¹² *SL*: 685/6:482. (I cite Hegel’s *Science of Logic* by first stating the page-number in the di Giovanni-translation, and then, after a slash, volume:page-number in the “Theorie-Werkausgabe”.)

character of external causation. Furthermore, Hegel uses his method to arrive at a conception of nature that involves not only external but also *internal* causation or determination. Such internal determination is present in *solar systems*, Hegel argues. For, the laws of planetary motion allow us to determine location and motion of the planets without recourse to any outside factors, while these laws constitute the “essence” of the planets: what the planets are is stated by these laws. Hegel asserts that the form exhibited by solar systems, which he calls ‘Absolute Mechanism’, is a first intimation of freedom within nature. By laying out this account, I show how, according to Hegel, freedom can be real. For, the following transition is intuitive. A body at first moves through space along a straight line and then gets captured in the gravitational field of a star. Once captured and orbiting the star, the body exhibits a higher form of determination qua planet: its location can now be determined through the laws of planetary motion and the question what initiated the motion drops out. The latter point finds its expression in the fact that, on the basis of planetary motion, it is not possible to determine when the solar system formed. The planet is thus not determined from without, by another body initiating its motion, and insofar exhibits a rudimentary form of freedom. This transition can thus figure as a connecting piece from external causation to life and ultimately human freedom.

Overall, I argue that Kant’s conception of nature contains external causation as a necessary relation among empirical objects, necessary—or a priori—because otherwise experience of events would not be possible. Furthermore, ‘nature’ is for Kant crucially to be understood as an idea, i.e., as an ideal end-point of experience and scientific inquiry. Because nature, and thus also mechanistic nature, is for Kant merely an idea is it that organisms and human freedom are not excluded. Yet, this merely negative argumentation—that teleology and freedom are *not excluded*—leaves wanting a positive conception of freedom’s reality. This positive conception is delivered by Hegel through his account of solar systems and the forms that follow Absolute Mechanism in the *SL*. Through his distinctive method, Hegel develops an account of nature in which lower forms—such as external causation—are

necessary, yet also necessarily contained ('sublated') in higher forms, such as those exhibited by solar systems or organisms. That is, solar systems and organisms are for Hegel part of the a priori concept of nature while they are not for Kant. In this way, Hegel seeks to do justice to the variety of natural phenomena and works out their distinctive forms as well as how they hang together—all the while shedding Kant's methodological reliance on the question of how experience is possible, as well as shedding Kant's assertion that the concept of an organism is merely an empirical concept.

Chapter 1

Transcendental Realism and the Second Analogy

“When Hume took objects of experience as things in themselves (as is done almost everywhere) he was quite correct in declaring the concept of cause to be deceptive and a false illusion.” – *CPrR*, V:53.

Introduction

Kant says that the concern of his *Critique of Pure Reason* is to “transform the accepted procedure of metaphysics”¹ by means of a “revolution in the way of thinking.”² This revolution in the way of thinking is not easy to achieve.³ I think that the philosophical position that is attained through said revolution, Transcendental Idealism, is helpfully approached through the contrast to its opposite, Transcendental Realism. It is thus a central aim of this chapter, and of this dissertation as a whole, to bring into view what Transcendental Realism is, to spell out its different facets, and to thereby illuminate the position that Kant’s revolution in the way of thinking is supposed to bring about, Transcendental Idealism. I furthermore consider the contrast to and rejection of Transcendental Realism to be a fruitful entryway into Hegel’s project in his *Science of Logic*, specifically in order to understand the idiosyncratic and difficult *method* Hegel is employing in that work. For, Transcendental

¹ Bxxii.

² Bxi.

³ About overcoming the natural illusion that comes with Transcendental Realism, Kant writes: “In judgments in which a misinterpretation is deeply rooted through long habit, it is impossible to correct them immediately with that lucidity that can be furthered in other cases, where our concept is not confused by such an unavoidable illusion. Hence our liberation of reason from sophistical theories can hardly have the clarity necessary for complete satisfaction.” (A387-8)

Realism is at bottom a position regarding philosophical cognition and thus method. It is at least a main goal of this chapter to argue for this claim, and to show that other statements about Transcendental Realism and Idealism are to be understood in light of this claim or can even be derived from it.

I thus pursue the lead that through the contrast to Transcendental Realism we get “true metaphysics” into view.⁴ This more general goal regarding the formal issue of philosophical method is made concrete in this chapter through a discussion of the material issue of whether nature is causally constituted or not. Hume famously argued that the common belief that events are caused is in fact an illusion. For—to make a long and complicated story comically short—the concept of causality cannot be justified on the basis of experience. Kant responded that Hume is wrong, because it is a prerequisite of having experience in the first place that we take events to have a cause from which they follow with necessity. Yet, Kant scholarship was never able to settle how exactly Kant’s arguments to that effect should be understood.⁵ I seek to show in this chapter that these arguments can be understood if we approach them through a rejection of Transcendental Realism. I thus discuss two influential accounts of Kant’s argument for the necessity of causality in the Second Analogy of Experience, those by Peter Strawson and Eric Watkins. Both of these accounts, I argue, rest on an unwitting assumption of Transcendental Realism.

I seek to make this case by first addressing the issue of what Transcendental Realism is. This issue I address by asking the question what the term “transcendental” in “Transcendental Realism” means. By drawing on Kant’s statements about transcendental cognition, I argue that Transcendental Realism—and thus also Transcendental Idealism—is a claim about the kind of philosophical cognition or knowledge that “transcendental cognition” is. Then, in section II, I lay out Kant’s argument for why events necessarily have causes. This provides the necessary background for my discussion, in

⁴ *MFNS*, Preface, IV:472. Cf. B786/A758, B316-8/A260-2.

⁵ While there is no consensus in the scholarship, Tegtmeier 2022 is, in my eyes, illuminating about this issue.

section III, of Strawson's account of the Second Analogy and his famous claim that Kant's argument contains a "non sequitur of numbing grossness". I show how Strawson is availing himself dogmatically of the concept of an event, which goes hand in hand with his occupying an external vantage point onto perception and experience of events. Alongside Strawson's and, in the subsequent sections, Watkins' accounts, I present how I think Kant's view about causation is to be understood, seeking to bring my interpretation into sharper relief through the contrast to Strawson's and Watkins'. In section IV, I turn to Watkins' reconstruction of Kant's argumentation in the Second Analogy. I show how Watkins' reliance on Kant's pre-Critical writings comes at the cost of his missing key insights of Transcendental Idealism; in particular, Watkins is missing Kant's point that the principle of sufficient reason cannot be dogmatically presupposed but rather must be understood as an aspect of the unity of consciousness, as it is constitutive of experience. Section V is devoted to Watkins' conception of causes as indeterminate and to his argument that only such indeterminacy can account for causal laws. Discussing these topics allows me to bring a further facet of Transcendental Realism into view, a facet which consists in treating the relata of relations as if they were separate entities, akin to the way in which two empirical objects are separate from each other. Then, in section VI, I show that Watkins' argument for the indeterminacy of causes rests on his connecting the universality of causal laws with the permanence of substances in a way that is expressive of Transcendental Realism; for it involves to conceive of an idea—in Kant's technical sense of the term as expressing an imaginary yet necessary object that guides us in our scientific inquiries—as if it were a concept that has objective reality in a direct and determinate way. I furthermore show in this section how, when the experience-centered account that is part of Transcendental Idealism is adopted, the demand for the idea of an absolutely permanent substance can be developed out of the Analogies of Experience. I conclude this chapter by a discussion, in section VII, of how Transcendental Realism also informs Watkins' philosophical

method. I lay out how Watkins' form of argumentation misses the transcendently idealistic conception of transcendental cognition as self-knowledge, wherein reason determines itself.

I. What Is Transcendental Realism?

In order to approach “true metaphysics” and Kant’s argument for nature’s causal structure, it is helpful to first get a sense of what Transcendental Realism is. I seek to elucidate the concept of Transcendental Realism by first determining what the concept “transcendental” means.⁶ To this end, I draw on Karin de Boer’s recent book *Kant’s Reform of Metaphysics*. In this book, she lays out a compelling account of the respects in which Kant moved beyond pre-critical philosophy, especially of the Leibniz-Wolffian variety, and of the respects in which there is a continuity.⁷ Regarding the “critical move” beyond the rationalistic conception of metaphysics, to which also Kant himself subscribed before his *Inaugural Dissertation* in 1770, de Boer writes:

“It follows from Kant’s new perspective ... that metaphysics can err in two principal ways. According to the 1770 strand of Kant’s critique, metaphysics errs if it lets sensible determinations infuse its allegedly intellectual judgments about the soul, the world, and God. I will call this strand [1]. According to the strand developed – or asserted – some time after 1770, on the other hand, metaphysics also errs if it alleges that its purely intellectual judgments constitute cognitions of objects... This new insight, which I will call strand [2], entails that the purely intellectual version of Wolffian metaphysics Kant aimed to develop [in 1770] in the *Dissertation* must yet be purged of the assumption that the noumena it generates and determines amount to objects of cognition. I contend,

⁶ This rather obvious approach is curiously absent in the existing literature.

⁷ For a similar posture within the anglophone Kant scholarship some forty years earlier, cf. Pippin 1982: 3, 7-17.

however, that Kant never abandoned the idea presented in the *Dissertation* that metaphysics must be turned into a purely intellectual discipline.”⁸

In his dissertation, i.e., in 1770, Kant already criticized the unclarified mixture of concepts that have their source in the intellect with concepts that have their source in sensibility. For example, Kant takes the concept “composition” to have its source in sensibility, while the concept “world” has its source in the intellect. If a philosopher now asserts the thoroughgoing compositionality of the world without taking the conditions of sensibility into account, then this philosopher will produce statements that overstep the boundaries of sensibility, such as the unqualified assertion, “Everything is composed of atoms.” Next to this strand of criticism, strand [1], de Boer claims that after 1770 Kant worked out a related but distinct strand of criticism, according to which statements that do not purport to be about objects of the senses are not about proper objects at all. That is to say that proper cognition is about objects of the senses, and that purely intellectual judgments—as made in philosophy—should not be understood as being about objects in the way that theoretical, empirical judgments are. This second strand of criticism, which cautions us about the purported objects of purely intellectual judgments, is strand [2].

Strand [2] provides the relevant background for the meaning of “transcendental” in Transcendental Realism, I submit. About ‘transcendental cognition’ Kant writes the following in the *Critique of Pure Reason*:

I call all cognition transcendental that is occupied not so much with objects but rather with our a priori concepts of objects in general. A system of such concepts would be called transcendental philosophy.⁹

⁸ de Boer 2020, 64-65.

⁹ B25/A11-2. Cf. also *Progress*, XX:272-3.

In contrast to theoretical cognition in the primary sense, which is cognition of objects of the senses,¹⁰ transcendental cognition is cognition of a priori concepts; for example, of a priori concepts that describe the form of theoretical cognition or, put differently, of a priori concepts that lay out how theoretical cognition is possible in the first place. We can thus say that transcendental cognition is genuine philosophical cognition, which, in contrast to theoretical cognition of objects (of the senses), is not *empirical* in nature. For, transcendental cognition is not directly about objects that are spatio-temporally distinct from us, nor directly about space and time,¹¹ but rather about our faculty of cognition. About *metaphysics* Kant says that, once reformed through reason's critique of itself, it consists in "a wholly isolated speculative cognition of reason [Vernunfterkentnis] that elevates itself entirely above all instruction from experience."¹²

This understanding of transcendental *cognition* finds confirmation in Kant's usage of "transcendental *critique*". In the preface to the first edition of the *CPR*, at Axi-xii, Kant focuses on the part of transcendental philosophy that he calls "critique" or "transcendental critique",^{13,14} a part which consists in the determination of the sources of the concepts employed by reason. There, Kant asserts transcendental critique's non-empirical character and describes transcendental critique as "self-knowledge". If transcendental cognition is to be distinguished from cognition of external objects, then it only makes sense to call it self-knowledge. We can thus say that transcendental philosophy consists of transcendental cognition, which centrally consists of transcendental critique, and which is self-knowledge rather than knowledge of external objects.

¹⁰ Cf. B661–663/A633–635; *CPrR*, V:65f.; *CPJ*, V:171; *CPJ*, V:288.

¹¹ That mathematical cognition is not transcendental cognition is clear from Kant's distinction between mathematical and transcendental propositions and proofs in the first chapter of the Transcendental Doctrine of Method, called "The Discipline of Pure Reason". (Cf., e.g., B810-1/A78203, B815/A787, B820/A792.) This is not to deny that there is of course transcendental cognition that involves space and time, e.g., the statement that space and time are the forms of our sensibility.

¹² Bxiv. Cf. A11, which was rewritten with a focus on purity as B24.

¹³ For the relation between critique and transcendental philosophy, cf. B28/A14.

¹⁴ For the equivalence of "critique" and "transcendental critique", cf. de Boer 2020: 93n41.

This account of transcendental cognition finds further confirmation in the following pertinent quote from the *Prolegomena*, where Kant states *his* usage of the concept “transcendental”: “The word transcendental ... with me never signifies a relation of our cognition to things, but only to the *faculty of cognition*...”¹⁵ When our cognition relates to our faculty of cognition, then it relates to itself. In this way, knowledge of the transcendental sort is self-knowledge, rather than knowledge of external objects.¹⁶

With this background about the concepts “transcendental cognition” and “transcendental” in place, we can approach the question what Transcendental Realism means. As is well known, Kant contrasts Transcendental Realism with Transcendental Idealism, the latter of which, according to Kant, is the position a philosopher has to adopt lest sensibility lead the intellect astray. And when the intellect is thus lead astray, the contradictions of the Antinomies of Reason arise.¹⁷ A central and oft-quoted passage regarding the topic of Transcendental Idealism, Transcendental Realism, and the relation between the two is the following one from the first edition of the *CPR*. In this passage, Kant lays out the distinction between Transcendental Idealism and Transcendental Realism regarding the concepts of space and time.

I understand by the **transcendental idealism** of all appearances the doctrine that they are all together to be regarded as mere representations and not as things in themselves, and accordingly that space and time are only sensible forms of our intuition, but not determinations given for themselves or conditions of objects as things in

¹⁵ *Prolegomena*, §13, IV:293.

¹⁶ This understanding also tallies with Kant’s account of “transcendental reflection” as a reflection that takes the faculty of cognition into account to which a representation belongs. (Cf. B317/A261) For an insightful discussion of the concept of reflection in Kant, cf. Boyle 2022.

¹⁷ For Kant’s claiming that the antinomies can only be avoided by adopting transcendental idealism, cf. B534-5/A506-7. For Kant’s statement that sensibility has to be limited (by the limiting concept of a noumenon) so that we are not led astray, cf. B311/A255.

themselves. To this idealism is opposed **transcendental realism**, which regards space and time as something given in themselves (independent of our sensibility). The transcendental realist therefore represents outer appearances (if their reality is conceded) as things in themselves, which would exist independently of us and our sensibility and thus would be outside us also according to pure concepts of the understanding.¹⁸

Before discussing how these elucidations of the terms Transcendental Idealism and Transcendental Realism should be understood in light of Kant's conception of "transcendental cognition", a few cautionary words are in order so as to avoid misunderstandings of this quote. First, it should be noted that declaring appearances, i.e., objects of the senses, to be representations does not entail that knowledge of objects in the world is impossible. On the contrary, Kant holds that objective knowledge can only be accounted for if we take into account that appearances are such that they can affect our sensibility and are thus to be regarded as representations.¹⁹ Representations are then not to be understood as merely subjective mental states that are separated by a gulf from the objects they are about. Rather, representations such as perceptions and concepts *allow us* to cognize appearances. Second, the connected point should be noted that "things in themselves" are not to be understood as 'the objects of the senses when truly known', but rather as 'objects of mere thinking, where sensibility is not taken into account'. By taking appearances to be things in themselves, the transcendental realist thus actually makes it impossible to account for objective knowledge. For, on the transcendental realist's construal, appearances cannot be truly known when cognized in a way that involves both sensibility and the understanding.²⁰

¹⁸ A369; translation amended. Cf. also B518-9/A490-1. Interestingly, the quoted passage from A369 is where the term "realism" is first used in philosophy. Cf. Halbfass – *Realismus*: 156.

¹⁹ This is why Kant's analysis of the concept of our faculty of cognition or knowledge involves a discussion of sensibility and understanding and a discussion of the representations that have their source in these two capacities.

²⁰ Kant says as much in the sentence following the ones quoted. There, he says that the transcendental realist is actually an "empirical idealist".

So, with these clarifications in mind, how is Transcendental Realism to be understood? I hold that both Transcendental Realism and Transcendental Idealism are to be taken as *claims about transcendental cognition*. The transcendental realist models transcendental cognition on empirical, theoretical cognition, while the transcendental idealist holds that transcendental cognition is a purely intellectual kind of cognition that is not directly about external objects, but rather about our own mind. I seek to bring this claim into sharper relief by first discussing the term “reality” so as to shed light on the term “realism”, and by then laying out how Kant’s claims about Transcendental Idealism and Realism from the quote above follow from my account of Transcendental Idealism and Realism as claims about transcendental cognition.

A reality is something positive, a positive determination or predicate. Examples of a reality, in contrast to the absence of such a reality, are: light vs. darkness, a moving force vs. the absence thereof, pain or pleasure vs. the absence thereof.²¹ It is a central claim of the mature Kant that reality—at least in the case of theoretical knowledge—only enters our mind through the senses. *Reality always “demands” sensibility.*²² Regarding the idea of non-sensible, i.e., noumenal, reality, Kant says that this concept brings with it the demand to give an example of such a “pure and non-sensible reality” and that this is impossible.²³ Accordingly, *transcendental ideas* (in Kant’s technical sense of the term “idea”), which are concepts that can *only be thought*, can never be directly realized.²⁴ They can only have reality indirectly and indeterminately, insofar as they are imaginary end-points of experience and empirical science.²⁵

²¹ *Prolegomena*, §24, IV:306; B320-1/A264-5. For further discussion of the concept of (objective) reality, cf. ch.2 of this dissertation, p. 81.

²² Cf. B344/A288. At B605/A577, Kant says that “apart from experience one is acquainted with no determinate species of reality.”

²³ B338/A282n.

²⁴ *Prolegomena*, §57, IV:353. B813/A785 indicates that ideas can be more or less realized, and can only never be fully realized. For a helpful discussion of Kant’s concept of a thing in itself in relation to the traditional term of a *res per se* and the traditional understanding of *realitas*, cf. Stone (ms.).

²⁵ Cf. B691-4/A663-6.

The term “realism” should be understood in light of the term “reality”, I hold. Transcendental Realism can thus be understood as the claim that transcendental determinations directly have reality, i.e., as the claim that transcendental cognition is to be understood along the lines of empirical, theoretical cognition.²⁶ Understood in this way, Transcendental Realism contrasts with Transcendental Idealism in such a way that the latter claims that transcendental determinations are merely thought, are merely ideal—i.e., that transcendental cognition is purely rational cognition. On this understanding it follows that transcendental cognition is, according to Transcendental Idealism, self-knowledge, whereas according to Transcendental Realism it is knowledge of external objects—or at least modeled on such knowledge.²⁷ An *empirical* realist, on the contrary, claims that empirical cognition, i.e. cognition of spatio-temporally external, existing objects, essentially involves sensibility; while an empirical idealist claims that empirical cognition is possible purely intellectually—or is to be modeled on purely intellectual cognition.

This understanding of the concept pair Transcendental Realism and Transcendental Idealism applies to the concepts of space and time in the following way. A transcendental realist conceives of space and time along the lines of external objects. For example, a transcendental realist of the empiricist variety, such as Newton, thus takes space and time to be independently existing entities,

²⁶ Cf. Pendlebury 2022: 51 for the claim that realities, also in the tradition, express how things might be, whereas metaphysical judgments express necessity. If transcendental cognition is about matters of necessity rather than possibility, then this point is in line with my claim that Transcendental Realism means to misconceive of transcendental cognition as if it were cognition with objective reality.

²⁷ Henry Allison holds that “transcendental realism should be understood as the view that spatiotemporal predicates are applicable to things in general.” (Allison 2006: 2) I agree with this characterization insofar as recognition of the point that transcendental cognition is not cognition of an external object entails that spatiotemporal predicates do not predicatively figure in it and thus do not apply to noumena. Yet, Allison’s account does not make transparent why Kant calls this view “Transcendental Realism”.

I am sympathetic to Graham Bird’s account of Empirical Idealism, which flows from Transcendental Realism. Bird holds that the empirical idealist “makes an unacknowledged transition from Kant’s empirical to his transcendental level of enquiry.” (Bird 1982: 88.) Yet, Bird thinks here of the empirical idealist using an empirical distinction, the distinction between representations and objects, and “transform[ing] it into an external use” in the case of transcendental questions about nature or objectivity as such. I am not sure that the distinction between representations and objects is an empirical distinction. Furthermore, Bird does not give an account of why the empirical idealist does this and, like Allison, Bird does not explain why Kant chooses his terminology in the way he does.

whereas a transcendental realist of the rationalist kind, such as Leibniz, tries to conceive of space and time in such a way that God can have knowledge of spatiotemporal properties—as properties of external objects. Once approached in this way, it suggests itself to conceive of space and time as entities that can be understood independently of *our* faculty of cognition.²⁸ Contrary to that, a transcendental idealist conceives of space and time as aspects of our faculty of cognition. (...namely, as the forms of our intuition, through which external objects are given to us.) Knowledge of general characteristics of space and time, e.g., that they contain a different kind of universality than the universality of a genus in relation to its species, is thus not knowledge of external objects, but knowledge of our faculty of cognition and thereby self-knowledge. Thus, Kant's characterization of Transcendental Idealism and Realism in relation to space and time, as quoted above, follows from the understanding of Transcendental Realism and Idealism that I propose, as claims about transcendental cognition.

I want to close this section by laying out how this understanding of Transcendental Realism and Idealism can shed light on a difficult passage from the preface to the B-edition of the *CPR*, a passage in which Kant characterizes the revolution in the way of thinking that he believes is necessary in order to advance philosophy. The passage reads as follows.

Up to now it has been assumed that all our cognition must conform to the objects; but all attempts to find out something about them a priori through concepts that would extend our cognition have, on this presupposition, come to nothing. Hence let us once

²⁸ The desire to conceive of space and time as understandable independently of our faculty of cognition is fueled further if one thinks, as Hume does, that an explanation is disappointing if it leads to the human mind. (Cf. *Treatise* 1.4.7.5.)

For a rationalist like Leibniz, empirical knowledge is to be understood as knowledge that God can have. In his *Mediations on Knowledge, Truth, and Ideas*, for example, Leibniz arranges different kinds of knowledge in a hierarchy, with intuitive knowledge on top. God has all knowledge intuitively. God's way of having knowledge does not involve sensible givenness, with space and time being the forms of sensibility. On Leibniz account, it must thus be possible to conceive of spatiotemporal predicates without taking our sensibility into account.

try whether we do not get farther with the problems of metaphysics by assuming that the objects must conform to our cognition, which would agree better with the requested possibility of an a priori cognition of them, which is to establish something about objects before they are given to us.²⁹

This passage should be understood as a claim about transcendental cognition, I submit. On such a reading, Kant's revolution in the manner of thinking consists in our becoming aware that we, so far, modeled philosophical knowledge, such as we find it in metaphysics, on knowledge of external objects. Furthermore, we should adopt a better approach, where we understand empirical, theoretical knowledge by means of the purely intellectual knowledge we acquire through transcendental critique. The "Copernican revolution" Kant proposes for philosophy is thus not to be understood along the lines of Empirical Idealism, but rather as a claim about the distinctive character of philosophical knowledge as self-knowledge.³⁰

In sum, Transcendental Realism is the doctrine that transcendental cognition has reality.³¹ According to the mature Kant, however, reality has to enter our mind through the senses.³² The transcendental realist thus models transcendental cognition on empirical, theoretical cognition, whereby the subject-matter of transcendental cognition is conceived along the lines of external objects. The shift from Transcendental Realism to Transcendental Idealism, however, is not trivial. For one, this shift involves Kant's re-interpretation of the traditional term "transcendental" so as to indicate

²⁹ Bxvi. Cf. also B124-6/A92-3; *Progress*, XX:274.

³⁰ While she does not talk about modeling philosophical knowledge on empirical knowledge, but rather focuses on the undue influence of sensibility on the philosophical thinking of the transcendental realist, I am indebted to Karin de Boer on this point.

³¹ For a reader who is so far not convinced of this account of Transcendental Realism, my summary discussion of Transcendental Realism on pages 205 ff. may be helpful.

³² A different way to approach Transcendental Realism consists in focusing not on Kant's usage of "transcendental", but on the traditional usage of that term, according to which realities are (truly) represented in an immediate way, in God's infinite intellect. I understand Kant as transforming that usage, which he does through his doctrine that realities are represented in an immediate way through the senses and in a mediate way through the (human) intellect. Purely intellectual knowledge is thus for Kant not knowledge of realities, but of the intellect itself.

philosophical self-knowledge. And then, independently of an engrained understanding of “transcendental”, Kant claims that Transcendental Realism is “a deception that is difficult to avoid”³³ and that it gives rise to “an illusion that cannot be avoided at all.”³⁴ This shift is difficult enough that even very good philosophers and widely acknowledged Kant scholars do not manage to rid themselves fully of Transcendental Realism. This is at least what I seek to show in this and the two following chapters. Of course, every one of these writers knows the more direct claims Kant makes about Transcendental Realism. Yet, regarding issues that are not immediately connected to these direct claims, the transcendental realist’s way of thinking can come to the fore even for authors who take themselves to avoid it. I first seek to show in what way Transcendental Realism can be present in a thinker who does not try to be a transcendental realist but who also does not take great care to avoid being one: Peter Strawson. Strawson argues that Kant, in his argument that events necessarily have a cause, commits “a non-sequitur of numbing grossness.” This charge is leveled from a transcendental realist’s vantage point, I hold. Before turning to Strawson’s argument and my assessment of it, we should get the object of Strawson’s criticism into view. This object of criticism is Kant’s argument that events necessarily have causes, an argument which he makes in the Second Analogy of Experience.

II. Context and Argument of the Second Analogy

In order to understand Kant’s line of reasoning in the Second Analogy, it is helpful to take one step back, as it were. The core of Kant’s account of theoretical, empirical knowledge is the unity of consciousness, as laid out in the Transcendental Deduction of the Categories. There, Kant argues that a mind can only be said to have content if that content is actively held together with all other content

³³ B305.

³⁴ B354/A297.

of that mind.³⁵ This is to say that some content, i.e., some representation, can only be said to be mine if that representation is actively unified in my mind with my other representations. This unification, now, happens—at least initially—by being aware of my representations’ relation to their objects.³⁶ Two concepts, e.g., are not merely juxtaposed in an accidental fashion, but are actively held together, if I use them to make a judgment about an object. The concepts “Socrates” and “sitting” are not merely juxtaposed but unified if I use them to make a judgment—“Socrates is sitting”, for example.³⁷ Similarly, perceiving a tree and perceiving green leaves are in my mind, are perceptions that I have, because I *can* unify them in the judgment, “This tree has green leaves.”³⁸

According to Kant, there is not only one but many ways in which perceptions can be unified in a mind. Kant lays out all of these ways in his “Table of Categories”, which is subdivided into four general ways in which perceptions can be unified, each of which comprises three specific such ways of unity. Generally, perceptions can be unified with respect to quantity, quality, relation, and modality. That is, specifically, the unity of the mind regarding perception can be made explicit by perceptual judgments about the *quantity* of the object(s) of perception: is there one, are there many, or is there a totality of such objects? Then, the unity of the mind regarding perception can be made explicit by judgments about the *quality* of what we perceive: is a quality present, absent, or limited? Similarly, we can make judgments about whether we perceive *an object to have qualities* (a *substance* to have *accidents*), whether something brings about a change in the qualities of an object (a change is *caused*), or whether two objects to stand in *causal interaction* with each other. Finally, we can bring the unity of consciousness

³⁵ Following Stephen Engstrom, I paraphrase Kant’s notion of “synthesis” as “actively holding together”. (Cf. Engstrom 2009, ch. 4.) For an influential—though not always adequately acknowledged—discussion of the spontaneity of the mind in Kant, cf. Pippin 1982 and Pippin 1987. For a defense of the concept of spontaneity in contemporary philosophy of mind, cf. Boyle 2009.

³⁶ Cf. B131-8.

³⁷ Cf. B141-2.

³⁸ This judgment need not be verbalized. It can also reside in my mind insofar as I understand that the tree has green leaves.

regarding perception to reflective consciousness by making judgments about whether a certain unification of perceptions is *possible, actual, or necessary*.

Having laid out the Table of Categories, Kant proceeds to the Transcendental Deduction, where he discusses the unity of consciousness in general, how it involves the potential for objective judgments, and its relation to the way in which objects can be given to us through the senses—i.e., the relation of the unity of consciousness to space and time. After that, Kant moves to discuss the way in which the Categories can be put to use, i.e., how they can be applied to objects of perception. Through such application in a concrete case, the unity of the objects that pertain to that case is brought out. Kant discusses this in the most general way possible by reflecting on the applicability of the Categories to pure time-determinations, a reflection that results in Kant’s laying out the pure time-determination for each Category. Each such time-determination Kant calls a “transcendental schema”. Further reflection, then, on how these schemata can be actual yields what Kant calls “The Principles of the Pure Understanding”, which are necessary and thus absolutely general laws of nature.³⁹ The most famous of these Principles of the Pure Understanding is, probably, the principle that Kant discusses in the section entitled “The Second Analogy of Experience”. This principle states—contra Hume—that every change in nature must have a cause.

Given the progression of the *Critique of Pure Reason*, the “principle of causality”, as we can call it, is to be understood as describing a way in which perceptions can be unified in a mind. We can perceive a “succession of a manifold” that seems to be “subject to a rule”,⁴⁰ as the schema of causality has it, and now the question arises how an objective judgment is possible about such a perception. This is the topic of the Second Analogy. That is, the specific question at issue in the Second Analogy is how the perception of a change can be objective, with such a claim to objectivity being expressed in a

³⁹ Cf. *Prolegomena*, §15; IV:295.

⁴⁰ B183/A144.

judgment. Kant's answer to this question is as follows. The way in which we can express an objective change consists in our making a judgment where we express that the succession of the states in the change is *determinate*. "Determinate" here means: fixed, unified, and describable. This determinacy, Kant holds, is something we express by assuming there to be a cause that necessitates the change at hand. That is, Kant argues that any objective judgment about a change involves the claim that there is a cause from which the change at hand followed, with necessity, as its effect. (It is worth noting that the starting point, as it were, is the perception of a change, and that *given the change* we claim that there must be a cause of that change. What Kant's account is centered on is *human experience*—and not a divine view from nowhere, as his early modern predecessors have it.⁴¹)

Considered in a bit more detail, Kant's argument is the following. First, Kant points out that if what we perceive is a change from one state to another, e.g., a stone changing from cold to warm or a ship changing location on a river, then the succession of states has a determinate order: first the one state, then the other state. This stone heating up in the sun is *first* cold, *then* warm, for example. Other changes have a different succession of states, but this change has *this* determinate order of succeeding states and it is more or less clear when the change started and when it stopped. This is a relatively uncontroversial point—even though discussion ensues about what follows from this point. The second step of Kant's argument, as I would construe it, consists in Kant's arguing that a determinate succession of states would "be only a subjective play of my imaginings" or "a mere dream",⁴² if that succession were not connected to objectivity, i.e., nature. An objective change or event is part of objectivity and must thus in one way or the other be connected to other objective things. Now, Kant

⁴¹ In Locke, for example, the notion of "real essence" involves a non-human view from nowhere from which the real essences can be known. (Cf., e.g., *Essay*, II.xxxi.6; IV.vi.12–16.) One might think that no divine view from nowhere is present in Hume's philosophy. Yet, the case can be made that Hume relies on such a view in his account of causation as constant conjunction. For, only from a divine view from nowhere can it be fixed which conjunctions hold universally and which do not. Without such fixing, Hume's distinction between what events we take to be constantly conjoined and what events are actually constantly conjoined loses its skeptical significance. (Cf. *EHU* 7.1.8 & .21; 7.2.3.)

⁴² B247/A202.

holds, the way in which a change is connected to other objective things, to other substances and changes in them, consists in that change being caused by something else that is objective. That is, we can only take a change to be objective if the change is caused by something external⁴³ to it. Absent such causing, nothing would mark the distinction between an objective change and a hallucination or dream. Furthermore, the question why the change at hand is the unified change it is, why it started when it started and ended when it ended, for example, is answered by recourse to a cause. Thus, an objective change must have a cause. (At this point it is worth noting that Kant establishes that there *must* be a cause if the change at hand is objective. Yet, contrary to Kant scholars such as Paul Guyer, this does not mean that we have to already know what that cause is or how it operates.⁴⁴)

Kant expresses the result of this argumentation in the following way:

That something happens, therefore, is a perception that belongs to a possible experience, which becomes actual if I regard the position of the appearance as determined in time, thus if I regard it as an object that can always be found in the connection of perceptions in accordance with a rule. This rule for determining something with respect to its temporal sequence, however, is: in what precedes, the condition is to be encountered under which the occurrence always (i.e., necessarily) follows.⁴⁵

⁴³ This externality need not be spatiotemporal externality. Only changes of velocity—in quantity or direction—must have a spatiotemporally external cause, as Kant lays out in the Mechanism chapter of the *Metaphysical Foundations of Natural Science*.

⁴⁴ Guyer 1987: 252. What we know a priori is the principle of causality, but no concrete empirical law. Kant expresses this point nicely in the following reflexion: “Empirically one can certainly discover rules, but not laws - as Kepler in comparison with Newton - for to the latter belongs necessity, and hence that they are cognized *a priori*. Yet one always supposes that rules of nature are necessary - for on that account it is nature - and that they can be comprehended *a priori*; therefore one calls them laws by way of anticipation. The understanding is the ground of empirical laws, and thus of an empirical necessity, where the ground of law-governedness can in fact be comprehended *a priori*: e.g., the law of causality, but not the ground of the determinate law. All metaphysical principles of nature are only grounds of law-governedness.” (R 5414, XVIII:176; cf. also B252/A206-7.)

⁴⁵ B245-6/A200-1; translation amended.

The change or occurrence, from a stone being cold to it being warm, say, is something that we can perceive. Considered in isolation, it is a possible experience. In order for us to conceive of the change as objective, i.e., to conceive of the possible experience as an actual experience, we have to conceive of that change as containing a determinate temporal order of states: first cold, then warm. This is something we do by considering that change to follow from a cause. Otherwise, the change would not be objective and we could not say that it *actually* has a determinate order. For, a merely subjective order of perceptions could just as well have a different order. Furthermore, the cause of the event is the objective reason why the change has the describable content it has—from cold to warm, say—and why the change has the temporal unity it has—that it started there and ended then. Whereas in a dream, there is no objective reason for a perceived change’s unity, content, and order. Finally, that this change, in its determinate succession, follows from its cause constitutes a rule, a rule according to which the change follows with necessity. Concrete such rules are, for example, “The sun warms the stone” or “Sources of radiation transfer energy onto bodies exposed to that radiation.”

Before turning to Strawson’s criticism of Kant’s argumentation, I want to briefly discuss the issue of the necessity of the rule that states the causality in question.⁴⁶ For, one might wonder why this rule must be such that the change follows *with necessity* from its cause. This issue is, I think, to be addressed in the following way. Given background conditions, there is *one* cause for an event, which determines that the event happens in the specific way in which it does, e.g., that it happens at this and not another moment. More complicated cases are to be understood in light of this primary case, I submit. These are cases where, for example, the background conditions are in flux or where, accidentally, two causes bring about an event. Thus, in the primary case it is one cause that accounts for the occurrence of the

⁴⁶ The question why the cause must contain a *rule* at all is addressed by the fact that cognition involves a singular and a universal element, intuition and concept. The cause is part of the universal element with respect to changes and hence a rule.

event in question. Now, if this one cause does indeed account for the occurrence of the event in question, then the cause would always account for the occurrence of the event in question, given that the background conditions are the same in all cases. If we identified the cause correctly and the background conditions are the same, then there is *no reason* why the cause should not bring about the effect. After all, the cause did so in the present case. Should the cause not bring about the event in a similar situation, then it must be that changed background conditions account for the difference. Hence, given the same background conditions, the cause brings about its effect with necessity. Often, it is hard to determine all relevant background conditions. This fact, as well as our fallibility in determining the right cause, can give rise to the impression that causality does not essentially involve necessity. Yet, as the argument just stated shows, these points do not invalidate the claim that an objective event follows with necessity from a cause.

III. Strawson's Post-Russellian Account

Transcendental Realism is a term Kant uses for the way of thinking prevalent among his early modern predecessors. It may thus sound surprising when I claim that Peter Strawson adopts this way of thinking. However, I think that it betrays too rosy a picture of progress in philosophy to assume that a very good philosopher raised in the post-Russellian anglophone philosophical milieu of the 20th century cannot possibly have something to learn from earlier philosophers. I argue that Strawson failed to learn Kant's lesson of Transcendental Idealism, and that this failure is visible in the way that Strawson criticizes Kant's argument that events necessarily have a cause. In order to make this case, I first present Strawson's criticism of this argument. Then, I criticize Strawson's criticism, by pointing out where he misunderstands Kant's line of reasoning and how this is related to his dogmatically relying on the concept of an event. This dogmatic reliance, I argue, is an expression of Transcendental Realism.

Strawson's criticism of Kant's argumentation centers on the issue of the last paragraph of the previous section, the necessity of the cause. Strawson holds that it is reasonable for Kant to claim that we experience an event as involving a determinate succession of states, a succession that is necessary *given that the event occurred in the way it did*. But, Strawson argues, it is a very different thing to claim that the event itself *had to* occur with necessity. The latter does not follow at all from the former. If we throw a dice thrice and it shows the numbers 6, 2, 5, then it is necessary for us to perceive the dice as first showing 6, then 2, then 5. But this allows for no claim whatsoever that there was any necessity to the dice showing first 6, then 2, then 5. Evidently taken aghast by this jump in reasoning, Strawson writes the following.

The order of perceptions is characterized not only as a *necessary*, but as a *determined* order ... But from this point [Kant's] argument proceeds by a *non sequitur* of numbing grossness. Suppose the objective succession in question consists in the succession of state of affairs B upon state of affairs A, in the change, that is to say, from A to B. It is admitted ... as necessary that the perception of the second state (B) follows and does not precede the perception of the first state (A). To conceive the sequence of perceptions as the perception of an objective change is implicitly to conceive the order of the perceptions as, in this sense, necessary. But – and here comes the step – to conceive this order of perceptions as necessary is equivalent to conceiving the transition or change from A to B as itself necessary, as falling, that is to say, under a rule or law of causal determination; it is equivalent to conceiving the event of change or transition as preceded by some condition such that an event of that type invariably and necessarily follows upon a condition of that type.⁴⁷

⁴⁷ Strawson 2019, 136-7.

Before turning to diagnosing the Transcendental Realism in Strawson's thinking, I want to point out in what way Strawson misunderstands Kant's line of reasoning. Strawson's misunderstanding consists, I think, in his misunderstanding the kind of necessity in question. Kant speaks of the determinate order of states within the change and then of the necessity of the causation by which the change is brought about. Kant holds the former to be connected to the latter insofar as we can only hold the former to be objective if we assume the latter. Strawson apparently does not see that this is Kant's argument and thus concludes that Kant simply identifies or confuses the determinacy of the order of states with the necessity of the causation.⁴⁸ This confusion would indeed constitute a rather stark non-sequitur on Kant's part—were it actually how Kant proceeds.

However, I think that this misunderstanding is not simply a lapse on Strawson's part or some weakness of the mind about which nothing more can be said. Rather, I think there is a reason for why an otherwise excellent philosopher such as Strawson was not able to see Kant's actual argument. This reason is, I claim, that Strawson's thinking is informed by Transcendental Realism.⁴⁹ Strawson's Transcendental Realism is manifest in his not getting the necessity of causation into view. This necessity is a necessity constitutive of the objectivity of events perceived. It only comes into view if the theorizer or philosopher assumes a first-person view and from there reflects on how the objectivity of events can be understood. Whereas Strawson is apparently only able to think of the necessity of perceiving an event as being a certain way *given that the event is occurring in that way*. This betrays Transcendental Realism insofar as an *external perspective* onto the perception situation is assumed. Strawson, as the theorizer, conceives of a situation in which he can tell that an event occurs, but where the perceiver in question is merely subject to a succession of perceptions. The question of how the

⁴⁸ I take my account to be considerably different from Allison's. Nevertheless, I am indebted to his identifying the issue of the different kinds of necessity that are in play in the Second Analogy. (Cf. Allison 1971.)

⁴⁹ That Strawson's thinking is informed by Transcendental Realism is not an original claim of mine. (Cf., e.g., Allison 2004: 255-6.) Yet, the way in which I spell this claim out is original and, I hope, a genuine contribution to the scholarship.

perceiver can conceive of the event as objective is thus not in view. For, that the event is objective is already settled by the theorizing onlooker. The notions of objectivity and of the unity of consciousness of a cognizer—here: the perceiver—are thus not in view if a cognizer is conceived along the lines of an external object of empirical knowledge. Consequently, the necessity that goes hand in hand with the notion of objectivity is then not in view. This is so unless, that is, we leave the external perspective and start to wonder how *the perceiver herself* could recognize a succession of perceptions to be objective. Once we do that, it enters into view that there is no telling whether a succession of perceptions is objective or not save by making a judgment that a succession of perceptions is objective and that hence there must be a cause from which the event followed with necessity. For, as I discussed above, it is through a cause that an event is considered objective, that it is “connected to objectivity”. (From such an *internal perspective*, it becomes relevant that the cognizer is fallible, that she may get wrong whether the succession of perceptions was really objective and that she may get wrong what cause the event has or had—which is something that was not particularly pertinent from the external perspective occupied by Strawson.)

Strawson thus separates the position of the philosopher and of the perceiving subject. He conceives of the philosophical subject matter—perceiving a change—on the model of experience of external objects, with the event and the perceiving subject slotted into the position of the objects of experience. To both of these “objects” Strawson assumes a relation as to a spatiotemporally external object. Thus, the necessity in question, a necessity that pertains to the perceiving subject, can for Strawson only be the necessity of the perceiver perceiving the event in the order in which it occurred—similar to a rock first reflecting red, then yellow, then green light, if illuminated first by a red, then a yellow, then a green light source. For, no other necessity makes sense from an external perspective. But from this kind of necessity, no claim can follow about events necessarily involving a cause. This

is, I submit, the reason why Strawson thinks that Kant commits “a non-sequitur of numbing grossness.”⁵⁰

I want to point out one further aspect of Strawson’s Transcendental Realism. This aspect consists in his, as a theorizer, availing himself of the concept of an event without reflection on how this concept could be available to himself. This aspect is part of the point from the previous paragraph that Strawson assumes an external perspective onto the philosophical subject matter. As theorizer, Strawson must be able to tell whether an event occurs or not, in order to make his case against Kant. He thus has the concept “event” at his disposal and can use it to tell that an event occurred in the scenario he is describing. For Kant, it is part of the problematic way of thinking of his predecessors that they did not reflect on the proper employment, and thus justification, of key concepts. Simply assuming that concepts relate to objects and can thus be used, without reflection on how that relation to objects is possible, is a mindset that Kant calls “dogmatism”. Dogmatism, Kant tells us, consists in...

...the presumption of getting on solely with pure cognition from (philosophical) concepts according to principles, which reason has been using for a long time without first inquiring in what way and by what right it has obtained them.⁵¹

The dogmatist takes philosophical concepts for granted. That is to say that the dogmatist treats these concepts as if they were a matter of empirical fact that we simply have to acknowledge. For example, it is an empirical fact that the earth has one moon or that the English word “sheep” is both the singular

⁵⁰ As will become clear in the progression of this chapter, that Strawson does not see how Kant actually proceeds is the effect of his Transcendental Realism in a twofold manner. For one, Strawson avails himself uncritically of the concept of an event. And then, in Humean fashion, he objectifies events, taking them to be separately existing entities that need connecting. Strawson thus thinks that the principle of cause and effect must do this connecting, while for Kant, as Watkins rightly points out, the principle of causality does not primarily unify temporally successive events. Rather, Kant’s principle of causality states that temporally successive states unified into an event must be seen as the effect of some cause.

⁵¹ Bxxxv.

and the plural form of that noun. The earth could have ended up having more moons or no moon at all and “sheep” could have received a plural form, as happened in the case of “horse”. Yet, given how things played out, the earth has one moon and “sheep” is both the singular and the plural form and we just have to accept that. In a similar fashion, it is a mere fact for the dogmatist that we find ourselves with the concept of an event at our disposal. As a brute fact, we simply use that concept and no further reflection on the availability of that concept is deemed necessary.

The problem with the uncritical use of concepts such as “event” or “cause” is, for one, that we then do not engage in “true metaphysics”⁵² or first philosophy. And then there is the problem that the proper boundaries of the use of these concepts will sooner or later be overstepped. Kant’s predecessors, for example, used the concept of a cause beyond its proper application, the proper application’s being in cases of perceived or perceivable changes. This uncritical usage gives rise to the antinomy about causation, in which we oscillate endlessly between believing that there must be a first cause and believing that there must be an infinite chain of causes.⁵³ Similarly, the uncritical usage of the concept of an event leads to its application from a fictitious, external view from nowhere. The view is from nowhere insofar as the conditions are not taken into account of how a localized, i.e., finite cognizer can use the concept at hand. This is, I submit, what Strawson does. Once he adopts such a fictitious view from nowhere, Strawson can say that an event occurred that the perceiver now perceives in the determinate order in which the event occurred. But the viewpoint from which the concept of an event is applied and the viewpoint from which the perception is taken to occur are thereby pulled apart. Adopting this fictitious view from nowhere makes Strawson not recognize the

⁵² Cf. *MFNS*, Preface, IV:472; B786/A758; B316-8/A260-2; VIII:160.

⁵³ The antinomy thus laid out is the first step of the antinomy of freedom, i.e., the Third Antinomy of Reason in the *CPR*. In the second step of that antinomy, the thesis position concludes that the causality of the first cause must be a causality of a different kind than natural causality. The antithesis position then responds that it is unclear how this different kind of causation can be unified with natural causation. I discuss the Third Antinomy in detail in the next chapter.

necessity that is involved in the concept of an objective change. For he, from his fictitious view from nowhere, has already established that an event has occurred, *whereby the question is lost out of sight how the perceiver is so much as able to recognize an objective event*. Dogmatism is an expression of Transcendental Realism, because the concepts at issue are treated as given, similar to empirical matters of fact. Thus, also this aspect of Transcendental Realism is present in Strawson's criticism of the Second Analogy, namely in his dogmatism about the concept of an event.⁵⁴

In sum, I gave an account of the way in which Strawson misunderstands Kant's reasoning in the Second Analogy, and of the ways in which Strawson's criticism of the Second Analogy betrays that Strawson's way of thinking is one that is informed by Transcendental Realism. This brought two facets of Transcendental Realism to the fore. For one, an external perspective is assumed onto the philosophical subject matter. And then, key philosophical concepts are used uncritically, i.e., dogmatically. In the following section, I turn to Eric Watkins' interpretation of Kant's Second Analogy. While Strawson did not try to be a transcendental realist, he may not have tried to avoid it either.⁵⁵ Watkins, on the other hand, wants to give a faithful account of Kant's argumentation in the Second Analogy. I argue that he does so by dogmatically relying on the concept of a sufficient reason, a dogmatical reliance which also renders his account an expression of Transcendental Realism.

⁵⁴ In adopting a fictitious view from nowhere, different from the cognizing subject, Strawson did not conceive of events as objects of experience of a finite cognizer, but rather as something that he as an external theorizer has "in view". He thus severed the concept of an event from sensibility, whereby he turned objects of experience into things in themselves. Having done this, skepticism about causation is inevitable, as Kant states in the following quote: "When Hume took objects of experience as things in themselves (as is done almost everywhere) he was quite correct in declaring the concept of cause to be deceptive and a false illusion." (*CPtR*, V:53.) Note that Kant claims that treating objects of experience as things in themselves, i.e., adopting Transcendental Realism, "is done almost everywhere."

⁵⁵ Cf. Lucy Allais' characterization of Strawson's relation to Transcendental Idealism in her introduction to the reprint of Strawson's *The Bounds of Sense*, Strawson 2019: xii.

IV. Watkins' Pre-Critical Account

In his influential book *Kant and the Metaphysics of Causation*, Eric Watkins gives an account of Kant's conception of causation that focuses on the metaphysics of causation. A central appeal of the book lies in Watkins' making a forceful and convincing case that Kant's model of causation is not one of "event-event causation", as Hume has it, where events are taken as given and the concept of causation is assigned the role of connecting given events. Rather, an event, for Kant, consists of a change of states of an object, and this change is the effect of a cause. I also interpret Kant in this way, whereas Strawson tried to understand Kant along the lines of the Humean model of event-event causation. While Strawson's criticism, as discussed in the previous section, focuses on Kant's argument insofar as it establishes how we can have *knowledge* of objective successions based on our perception, Watkins focuses on the *metaphysics* of objective successions and causation. Regarding Kant's exact argumentation in the Second Analogy, Watkins' interpretation is interesting because he is a widely acknowledged Kant scholar from the early 21st century who construes Kant along the lines of Transcendental Realism. His interpretation can be seen as an expression of the pendulum swinging back from the empiricism that was prevalent in 20th century anglophone Kant scholarship⁵⁶ to pre-Critical rationalism. That Watkins' account is indeed an expression of pre-Critical rationalism—and thus of Transcendental Realism—is what I seek to show in this section. To do so, I first lay out Watkins' account of the Second Analogy. This account prioritizes metaphysics over epistemology and ultimately relies on the principle of sufficient reason to make sense of Kant's argument. Then, I state

⁵⁶ For a statement of 20th century anglophone Kant scholarship being focused on empiricism, cf., e.g., Pippin 1974: 247. For a criticism of Kant scholars not only having empiricism as their object of discussion, but of their thinking actually being informed by empiricism, in the case of prominent anglophone Kant-scholars such as Paul Guyer and Béatrice Longuenesse, cf. Rödl 2012, ch. 4. While Rödl is very perceptive in detecting Longuenesse's empiricistic construal of perception, I think he is not charitable enough when it comes to his assessment of Longuenesse's claim that "Kant argues [in the First Analogy] that the presupposition of a permanent substratum of transitory determinations is itself not a result [...], but a *condition* of perceiving the objective change as well as the objective simultaneity of sensible qualities." (Quoted at Rödl 2012: 115.)

where I take Watkins to miss Kant's actual argument. Watkins does that insofar as he is not recognizing the fundamentality that epistemology assumes in Kant's Critical philosophy, a fundamentality that leads epistemology—done in a certain way—to be *a* if not *the* way to do metaphysics. After that, I criticize Watkins' account by means of Kant's arguments against dogmatic reliance on the principle of sufficient reason. These arguments bring out that Watkins mistook the PSR, which is actually a merely logical and thus formal principle, for being a metaphysical and thus contentful principle. This is one way in which Watkins falls prey to Transcendental Realism, for he uncritically assumes the PSR to have objective reality and content. Finally, I use the contrast to Watkins' transcendentially realistic argumentation, which seeks to ground the principle of causality in a higher, more general principle, to bring out how the mature Kant argues for the principle of causation by unfolding the unity of consciousness.

Watkins seeks to illuminate Kant's Critical philosophy by drawing on Kant's pre-Critical work, where Kant was more clearly a rationalist of the Leibniz-Wolffian bent. Watkins describes his general approach in the following way:

Taking Kant's pre-Critical views into account ... allows us to see, in a way that was not obvious before, that, at least in the context of these central arguments of the Critique [i.e., the Analogies of Experience], Kant is neither an arch-epistemologist (who might be concerned solely with "epistemic conditions" or "inference tickets") nor a purely descriptive metaphysician (who would merely try to describe, on the basis of conceptual analysis, what the world must be like). Rather, he is interested in establishing a certain kind of metaphysical principle (concerning causality and mutual interaction at the phenomenal level) as the necessary presupposition of fundamental epistemological

principles (which include our knowledge of succession and coexistence, that is, our unified experience of the world).⁵⁷

Watkins' approach consists in applying Kant's pre-Critical metaphysics to the topic of experience. Thereby, the philosophical discipline of metaphysics is not simply passed by, as a purely epistemological approach would have it, and the concept of knowledge receives pride of place because the task at hand is to state the metaphysics that is the "necessary presupposition of fundamental epistemological principles." The advance of the Critical Kant over the pre-Critical Kant is thus taken to consist in the Critical Kant's considering it crucial to not just do metaphysics straight away, but to state the metaphysics that must be in place in order for knowledge to be possible.

In the case of the Second Analogy, this approach means that Watkins takes Kant to state the metaphysics that is the "necessary presupposition" of knowledge of objective changes, i.e., of events. Or, as Watkins puts it, "Kant's argument is to be understood as attempting to reveal ontological conditions for knowledge of objective succession."⁵⁸ Watkins acknowledges that not all arguments that Kant states in the text of the Second Analogy speak to exactly that task, which is why Watkins distinguishes between merely epistemological arguments and arguments that can be understood in a metaphysical way.⁵⁹ This is also reflected in the way in which Watkins structured his exposition of Kant's argumentation in the Second Analogy, in which Watkins first discusses a preliminary epistemological argument and then turns to what Watkins considers the "main argument" of the Second Analogy, an argument that does fit the task of stating the metaphysics that knowledge of objective succession presupposes.⁶⁰ This "main argument" Watkins construes as follows:

⁵⁷ Watkins 2005: 12.

⁵⁸ Watkins 2005: 213.

⁵⁹ Cf. Watkins 2005: 215n48.

⁶⁰ Cf. Watkins 2005: 207-10.

P1 Apprehension of objects (the subjective order of perceptions) is always successive.

P2 There is a distinction between the subjective order of perceptions and the successive states of an object such that no immediate inference from the former to the latter is possible.

C1 One cannot immediately infer objective succession from the successive order of perceptions. (from P1 and P2)

P3 To have knowledge of objective succession, the object's states must be subject to a rule that determines them as successive.

P4 Any rule that determines objective succession must include a relation of condition to conditioned, i.e., that of the causal dependence of successive states on a cause.

C2 To have knowledge of the successive states of an object, the object's successive states must be dependent on a cause, that is, must stand under a causal rule. (from P3, P4, and C1)⁶¹

In the first three steps of the argument, Watkins states that there is a separation between the subjective order of perceptions and the objective order of states of an object, and that this separation cannot be bridged by means of an inference from the former to the latter. Then, in the second part of the argument, there is a shift to the metaphysical register and it is laid out how we must conceive of an objective succession. The first point of this second part is that for states to be successive, they must be subject to a rule. Watkins himself does not explain this point further, but only quotes a passage from Kant in support of it.⁶² Then, in P4, Watkins states that this rule must also include reference to a cause. For, so the argument goes, a succession of states is something conditioned, and as such must include reference to its condition. This is a conceptual truth, namely that everything conditioned must have a condition. The condition is then called "cause", whereby the metaphysics of objective

⁶¹ Watkins 2005: 209-10.

⁶² Watkins 2005: 210. I argue for this point by holding that absent a rule, nothing warrants us in taking states of an object to be successive.

successions are stated: every objective succession must have a cause. Given that this is the metaphysics of events, knowledge of events consists in just that: knowledge of what the metaphysics of events states. This is the conclusion drawn in C2.

Watkins considers the brunt of his explanatory work to consist in making P4 plausible. In order to do so, he draws on Kant's pre-Critical views, which he seeks to bring to bear on P4 in the following way.

To understand more fully the justification for P4 – more specifically, why causality rather than any other kind of connection is required for knowledge of objective succession – it is helpful to compare the structure of the Second Analogy's argument with certain aspects of Kant's pre-Critical views. If the pre-Critical Kant consistently held (in fact, quite explicitly after 1763) that real grounds are responsible for positing determinations and the Critical Kant is investigating in the Second Analogy how temporal determinations are possible, then it appears that in the Second Analogy Kant is simply looking for real grounds of the temporal determinations of objects.⁶³

Equipped with the pre-Critical understanding of a real ground, Watkins holds that “in the Second Analogy Kant is simply looking for real grounds of the temporal determinations of objects.” Given the pre-Critical, purely metaphysical understanding of a real ground, Kant's looking for real grounds is understood as his seeking to give an account that is first and foremost metaphysical—in a sense of metaphysics that I would consider pre-Critical. In fact, Watkins is quite explicit that he reads the Analogies as simply applying Kant's pre-Critical metaphysics to a new topic: temporal determinations. Having identified Kant's Critical concept of a cause with the concept of a real ground, as understood in Kant's pre-Critical work, Watkins says that...

⁶³ Watkins 2005: 213.

...it is simply an analytic truth that determining the temporal states of objects requires causality. In other words, because (1) determinations are posited only by means of grounds, (2) the temporal determinations Kant is concerned with in the Second Analogy are temporal determinations of the states of objects, and (3) grounds of the determinations of states of objects are simply the causes of those states, it follows that causality is required for the temporal determination of objective succession.⁶⁴

As Watkins puts it a page later, “Kant’s idea is simply that any determination (and therefore successive determinations as well) requires a ground to posit it, since otherwise the object in question will be indeterminate in that respect.” That is, the argument rests on the principle that any determination can only be the determination that it is if there is something that determined it that way. This something is the determination’s determining ground or sufficient reason. That is, the argument of the Second Analogy, as Watkins construes it, rests on the *principle of sufficient reason*. For Watkins, the Second Analogy is thus simply an application of the principle of sufficient reason to the topic of the succession of states of an object. In this way, according to Watkins, the metaphysics that is the “necessary presupposition” of the epistemological topic of knowledge of objective successions is stated.

As in the last section with Strawson, I want to first state where I think that Watkins misunderstands Kant’s argument before I turn to a systematic criticism of Watkins’ rendition of Kant’s argument. As a general assessment, I think that Watkins does not appreciate the fundamentality that the Critical Kant assigns to certain epistemological issues. As I understand it, Kant’s Critical turn consists in his realizing that metaphysics goes—or at least went—astray when the metaphysician does

⁶⁴ Watkins 2005: 214.

not ask (and answer) what we can in principle know.⁶⁵ For, it is through reflection on the question of how something can be an object for us at all that Kant settles which concepts have objective reality and which do not, and in what different ways concepts can have objective reality.⁶⁶ Without such reflection, a metaphysician will sooner or later traffic in concepts that she takes to have objective reality while they actually do not. A further aspect of the Critical turn, thus understood, is that we can *only* justifiedly say of things we can know that they exist.⁶⁷ Epistemology, understood in the fundamental sense of addressing the question “How is knowledge possible?” and thereby the question “What can we know at all?”, is thus tantamount to metaphysics—it is, for the Critical Kant, the proper way to do metaphysics. For, no justified claim can be made for an entity to be part of metaphysics if no knowledge of that entity is possible.⁶⁸ We are able to phantasize about entities, and the concepts of these entities may not contain a contradiction, but that does not tell us at all whether these entities really exist. This understanding of the Critical turn contrasts with that of Watkins. For Watkins, the Critical turn consists in Kant’s simply becoming interested in a new topic, epistemology.⁶⁹ And it is just because of this new interest that Kant now uses the question how knowledge of certain entities is possible as the starting point for his metaphysical inquiries.

⁶⁵ Cf. Robert Pippin’s important, and all too often neglected, point that Kant’s philosophy cannot be easily slotted into one of the two boxes commonly called “epistemology” and “metaphysics”, and that Kant’s philosophy rather questions that division. (Cf. Pippin 1982: 24.)

⁶⁶ The different ways in which concepts can have objective reality are, for example: being an empirical concept, being a concept that has its origin in our forms of intuition, being a concept that is constitutive of experience but has its origin in the understanding, being a concept that guides our empirical research, ...

⁶⁷ Note that Kant allows for indirect knowledge, where we conclude that something must exist *given* certain direct experience. (Cf. B273/A225-6; B629/A601.)

⁶⁸ After all, metaphysics is supposed to be a science (cf. Bxxii; B18-9; B22; *Prolegomena*, IV:279), and a science is a body of knowledge (cf. B869/A841). I am thankful to Maximilian Tegtmeier for suggesting this phrasing to me.

⁶⁹ Watkins holds that the topic of time-determination just happened to be a hotly debated topic in the 18th century and that this is why Kant turned to it in the *Critique of Pure Reason*. (Cf. Watkins 2005: 216.) Watkins expresses that he takes Kant to have retained his pre-Critical conception of metaphysics and just adapted it in light of his new interest in epistemology when he says that his, i.e., Watkins’, “general conception of the “Critical turn” suggest[s] that Kant would retain as much as possible of his pre-Critical view, incorporate it into an epistemological context, and eliminate only those elements that are flatly inconsistent with his Critical views.” (Watkins 2005: 293.)

Regarding the Second Analogy more specifically, I think that Watkins thus misses the fundamentality of the question “How is knowledge of events possible?”, a question that Kant develops out of the question “How is knowledge possible at all?”.⁷⁰ Similar to what Strawson seems to do in his account of Kant,⁷¹ Watkins does *not* think that we must answer that question in order to be entitled to speak of events. Rather, Watkins as well takes it as a given that we can tell that there are events. For him, the question is just how to best put the fact of events into words, i.e., to give a metaphysics of events—so that we can subsequently say what we have knowledge of when we have knowledge of events. That Watkins considers the epistemological question “How is knowledge of events possible?” to be merely an occasion for doing metaphysics is also reflected in there being no internal connection from the epistemological to the metaphysical question in his construal of the “main argument” of the Second Analogy. I expressed this above as a “shift to the metaphysical register” when the argument moves from C1 to P3, a shift that is rather unmotivated if the reader is not primarily interested in doing pre-Critical metaphysics and only uses epistemological questions as a—more or less arbitrary—starting point. Simply embracing Watkins’ “metaphysics first” approach does, however, not sit well with the text of the Second Analogy—and the *Critique of Pure Reason* in general. For, if we are only interested in the question of the metaphysics of events, then it is not clear why we should trouble ourselves with all the epistemology that Kant engages in. Nothing in Watkins’ construal of the Second Analogy says that a metaphysical account of events would be amiss without the epistemological considerations that make up a large part of the text of the Second Analogy. More concretely, no argument that involves epistemological concerns, such as the one that I take to be central to the

⁷⁰ One can understand this development to take the following form. The contrast between persistence and change is fundamental to there being any empirical knowledge at all. This contrast is the topic of the First Analogy, where Kant lays out how knowledge is possible of something that persists. There is thus an internal connection between the First Analogy and the Second Analogy insofar as the former deals with persistence and the latter with change.

⁷¹ It should be noted that Strawson may simply not have seen how *Kant* is able to justify the concept of an event.

Second Analogy, is necessary in Watkins' account. To state this argument for reasons of contrast: an objective succession of perceptions must have a cause, because otherwise *no discursive knower* could tell whether the perceived succession is objective or merely subjective. The presence of a cause is the very thing that marks the difference between a merely subjective and an objective succession. That is, the objectivity of an objective succession just consists in there being a cause, a cause that accounts for the unity of the event and for the order of the states and thus perceptions. Discursive knowers such as we are thus have to take a perceived succession of states to have a cause in order to take this perceived succession as objective—without yet necessarily knowing what this cause is. On Watkins' interpretation, the recourse to discursive knowers is eliminated and objective successions are theorized about from an external view from nowhere. The fact that the order of states in an objective succession is determinate (whereas the order of states in a subjective succession is not) is taken as an instance of determination, which qua determination needs a ground—as per the principle of sufficient reason. Thus, all the “heavy lifting” is done by the PSR, which is simply applied to the topic of the temporal determination of states of an object. In this way, Watkins reconstructs the Second Analogy in the vein of pre-Critical metaphysics, by constructing the argument in such a way that it rests on the PSR rather than on the unity of consciousness.

Yet, it is exactly the dogmatic reliance on the principle of sufficient reason that Kant criticizes in rationalistic metaphysics. And Watkins' account can be criticized in exactly that way. In a perfect reversal of the argumentative order of Watkins' account, Kant actually took the principle of sufficient reason to stand in need of justification, and the Second Analogy is the very point at which Kant justifies it.⁷² This justification works by Kant's grounding the PSR in the unity of consciousness, i.e., by showing that we can only have knowledge of an objective, temporal succession by taking the

⁷² For a helpful discussion of this topic, cf. Longuenesse 2001.

successive states in question to have a cause. However, this “grounding” is a case of transcendental cognition and thus not to be construed along the lines of grounding as it happens in empirical, theoretical knowledge, such as grounding the increase of warmth in this stone in a more general principle or law about electromagnetic radiation. Thus, while Watkins seeks to ground objective succession in the PSR, on the model of grounding a more particular case in a more general principle,⁷³ Kant actually grounds the PSR in the concept of objectivity, a concept that is intrinsically related to the unity of consciousness. We thus see how Watkins’ pre-Critical account ignores epistemology in the explicit argumentation, while the actual argument, on his construal, is modeled on empirical cognition. Kant’s Critical metaphysics, on the contrary, works by asking the epistemological question “How is knowledge of events possible?”, a question that gets answered not by recourse to some more general, dogmatically assumed principle, but by unfolding the concepts involved in the objective unity of consciousness, i.e., knowledge, whereby we come to know how cognition of objects is possible a priori.

Given that Watkins argues via the PSR, it is worthwhile to look into how the mature Kant criticizes a metaphysics that operates by uncritically presupposing the PSR. Looking into this criticism also allows for determining further how transcendental cognition works, specifically, how the principle of causality can be justified a priori, despite being a contentful principle. According to the Critical Kant, rationalistic metaphysicians mistook the principle of sufficient reason for being a metaphysical principle, while it is actually merely a logical principle. Qua logical principle, the PSR stands in need of being “filled” with content—to speak metaphorically. The same point can be expressed regarding the correct order of what is primary and what is secondary: The PSR is a principle that was abstracted away from full-blown, contentful judgments, such as “The sun warms the stone.” If we abstract away

⁷³ I am indebted to James Conant for many helpful discussions about this and many other issues.

or generalize one step less, then the principle of the latter kind of judgments is not the fully abstract PSR but the somewhat less abstract principle of causality. This principle states that every change—and thus every generation and corruption of things—must have a ground, with this ground’s being its cause. In his polemic against the Leibnizian philosopher Eberhard from 1790, entitled *On a Discovery whereby any New Critique of Pure Reason Is to Be Made Superfluous by an Older One*, Kant says the following about the distinction between the PSR and the principle of causality. (Please note that the translator put the English “reason” in the case of the PSR and “ground” in the case of the principle of causality, whereas in the German original it is “Grund” in both cases.)

That *every proposition must have a reason* is the logical (formal) principle of cognition, which is subordinated to, and not set beside, the principle of contradiction. That *every thing must have its ground* is the transcendental (material) principle, which no one has ever proven or will prove by means of the principle of contradiction (and in general from mere concepts without relation to sensory intuition). It is clear enough, and has been stated countless times in the *Critique*, that a transcendental principle must determine something *a priori* in regard to objects and their possibility; consequently, it does not, like the logical principles (which abstract completely from everything concerning the possibility of the object), merely concern itself with the formal conditions of judgment.⁷⁴

Kant says here that the PSR—as well as the principle of contradiction—is merely a logical principle. As such it is merely formal rather than material, i.e., it is lacking content. The decisive difference between the PSR and the principle of causality lies in the fact that the latter is a transcendental and thus material principle. That is, the principle of causality is a contentful principle—at least in comparison to logical principles. Yet, the principle of causality is unlike other contentful

⁷⁴ *On a Discovery*, VIII:194.

principles, which are *empirical* principles, insofar as it can be justified transcendently. Generalizing empirical judgments about events so as to arrive at the principle of causality is possible, but we then merely state the *empirical deduction* of that principle. An empirical deduction merely tells us how we have in fact acquired that principle, whereas a *transcendental deduction* shows that empirical knowledge and thus objectivity would not be possible without that principle.⁷⁵ Given that it is the insight of the Critical Kant that fundamental epistemology just is the way to do metaphysics, this means that the principle of causality is a basic metaphysical principle. As such, the principle of causality is necessary and universal, whereas empirical principles are subject to revision in light of further evidence. The principle of causality is not subject to such revision because, if Kant's *transcendental* argument is correct, every evidence is construed along the lines of the principle of causality (and of all the other Principles of the Understanding). That is to say that the way in which the principle of causality has content is radically different from the way in which empirical principles have content. Empirical principles have content because they are generalizations from empirical observations, which have empirical content by being empirical observations, whereas the principle of causality has content because it flows from a reflection on how it is in general possible for sensibility and the understanding to be unified, unified in such a way that empirical knowledge is possible.⁷⁶ The PSR, on the contrary, is simply an abstraction from the principle of causality. Without the principle of causality, the PSR has no footing, as it were. The rationalists tried to provide for this footing by deriving the PSR from the principle of contradiction, which is a pursuit that Kant considers to be doomed to fail. This is why the Critical Kant holds that the PSR, taken in isolation, stands in need of justification, a justification that is provided by the Second Analogy, wherein the PSR is shown to be an abstraction from the principle of causality. It thus does not make sense to use the PSR in order to justify the principle of causality, as the pre-Critical

⁷⁵ Cf. B124-6/A92-3.

⁷⁶ Cf. B748/A720.

rationalists sought, and as Watkins seeks to do.⁷⁷ A merely logical principle cannot be used to justify a contentful, metaphysical principle.

Yet, Watkins uses the PSR as if it were a metaphysical principle. Not having the specificity of transcendental cognition in view, he construes the PSR along the lines of ordinary contentful principles, i.e., empirical principles. He furthermore seeks to ground the principle of causality in the PSR, which he takes to be more general than the former, just as a principle about sunshine can be grounded in a more general principle about electromagnetic radiation. Watkins thus construes the philosophical subject matter of the principle of causality on the model of empirical cognition and its subject matter. Absent a conception of transcendental cognition as self-knowledge, Watkins seeks to ground one principle in another, along the schema of X being grounded in Y. But if X is grounded in Y, in what is Y grounded? As far as I can tell, Watkins does not address the question in what the PSR is grounded. (This is undoubtedly in part because he does not acknowledge that it is in fact the PSR he is relying on in his construal of the “main argument” of the Second Analogy.) He seems to rely uncritically on the PSR. But, according to Kant, it is such dogmatic reliance that made the pre-Critical rationalists not see that the PSR is actually merely a logical principle and cannot be used to derive the existence of entities that go beyond our knowledge. Besides modeling philosophical cognition on empirical cognition by seeking to ground a given principle in a higher, more general principle, Watkins’ thinking is informed by Transcendental Realism insofar as he dogmatically presupposes the PSR, does not acknowledge the fundamentality of epistemology for metaphysics, and uncritically assumes the availability of the concept of an event. As we have seen in the last section, the latter two points go hand in hand with adopting an external vantage point on the subject matter.

⁷⁷ For a helpful discussion of the difference between Leibniz’ conception of logical principles and that of the mature Kant, cf. Conant 2020.

In the next section, I show another way in which Watkins thinks along the lines of Transcendental Realism, namely in his account of causes and causal laws. Watkins argues for causes to be temporally indeterminate, a claim that he grounds in the universality and necessity of causal laws.

V. Watkins on the Indeterminacy of Causes and Causal Laws

It is helpful to consider Watkins' account of causes, as it provides further evidence of Watkins' Transcendental Realism and because it allows us to see how Watkins' Transcendental Realism leads to an account of causes that contains a sharp separation between the sphere of experience and the sphere of causes. I show that this account has the highly unattractive consequence of causes having to be absolutely indeterminate, which renders it mysterious how there can be different causes for different phenomena. In this way, Watkins' pre-Critical account is shown to be untenable, even if not taken as an account of the Critical Kant, but considered as a philosophical account in its own right. Then, I show that Watkins indeed holds this highly unattractive view by laying out his argument that only absolutely indeterminate causes allow for a robust conception of causal laws. The decisive step in his argument is his connecting the universality of causal laws with the persistence of substances. I argue that Watkins misses that, for the Critical Kant, an absolutely persisting substance is a mere *idea*, rather than something real. This facet of (Watkins') Transcendental *Realism* provides the occasion for me to lay out a central facet of Transcendental *Idealism*, namely, Kant's distinctive doctrine of ideas as something we strive for in experience and science but can never reach. I furthermore give an original account of how—when Transcendental Idealism is adopted—the idea of an absolutely universal, causally acting substance, i.e., the idea of a basic power, can be derived by reflection on the Analogies of Experience. As in the previous section, the contrast to Watkins' account brings Kant's actual position further into view. In this section, this happens specifically regarding the relation between

cause and effect, causal laws, and how the demand for ever more general causal laws can be derived merely on the basis of the Analogies of Experience.

I want to begin this section by showing how Watkins ends up with a dualistic account in which the sphere of (temporal) determinations is separated from the sphere of unchanging, indeterminate causes. This dualism, I argue, follows from Watkins' misunderstanding of the principle of causality as entailing causes that are in no way like effects whereby causes and effects are rendered radically distinct entities. So far, we have looked into Watkins' reconstruction of Kant's argument in the Second Analogy, which yielded that events must have a cause. However, the "Second Analogy ... leaves completely undetermined what the cause of the succession of states might be."⁷⁸ That is, the Second Analogy does not tell us much about what exactly causes are. So, what are causes? What is their nature? To approach Watkins' construal of Kant's account of causes, we should recall that Watkins considers causes to be instances of "grounds". About his model of causes as grounds Watkins says the following.

The basic idea of a model of causality for which grounds are central is that one substance determines the successive states of another by means of an unchanging ground that is part of its essential nature. Since a ground both acts in accordance with essential features of the substance and is a source of change (insofar as it determines the successive states that constitute change), it cannot itself change from one determinate state to another (because that would entail an infinite regress). As a result, a ground is not temporally determinate in the way in which the effect is, since the effect, unlike the cause, has one determinate state at one moment in time at its beginning and another such state at its end.⁷⁹

⁷⁸ Watkins 2005: 223.

⁷⁹ Watkins 2005: 244.

Given a basic asymmetry between ground and grounded, i.e., between determining and determined, the ground cannot be determined, Watkins holds. Grounds, and a fortiori causes, are thus *indeterminate*. Due to their indeterminacy, grounds *cannot change*. This may seem odd, for a lightbulb can plausibly be taken to be the cause of some light. Yet, the lightbulb's capacity to emit light can equally plausibly be taken to change by altering the lightbulb, or to vanish altogether if the lightbulb ceases to exist—when the lightbulb melts after being thrown into a furnace, say. Thus, why should we take causes to be truly indeterminate and unchanging? Could a cause not be determined by some other cause?

Watkins responds by invoking the notions of activity and passivity, which he associates with causation and determination:

The crucial point here lies in Kant's understanding of the notions of activity and passivity involved in causality. Recall that for Kant a cause is not only constantly conjoined or even necessarily connected with its consequent effect, but also *brings about* or *produces* its effect by *actively determining* the boundary states of an object. The object so determined thus does not exist fully formed from the start with this determination, but rather passively receives it. Now, if one were to try to determine the cause (by some further causal connection), the result would, by parity of reasoning, be a passive determination of the substance that is the cause, not the activity essential to the causality of the cause. In other words, one could determine in this way a state of the cause, but not what is at issue, namely the activity by which the cause brings about its effect.⁸⁰

The underlying principle of this reasoning is that the same thing cannot be both active and passive. Hence, because causes are active and because determinations are passively received, causes cannot be determined. Applied to the case of the lightbulb, Watkins' position is thus that if we want to conceive

⁸⁰ Watkins 2005: 262.

of the lightbulb as a cause, then we have to separate what *in* the lightbulb is the cause of light from whatever in the lightbulb can be determined by external causes. The lightbulb is thus to be decomposed, by metaphysical reasoning, into two heterogeneous parts, one of them active, the other passive.

But why should we accept this sharp dichotomy between activity and passivity? Does the example of the lightbulb not show that the lightbulb's activity of emitting light is set off by its receiving the passive determination of being switched on? And does the example of the lightbulb's being altered or even melting in the furnace not show that causes can change and even cease to exist? Watkins response is that appearances are deceptive here. For it is metaphysically impossible for causes to change, i.e., to be determined by a cause:

The obvious objection to this [i.e., Watkins'] line of thought is that it seems arbitrary to restrict change to change of determinations. Why not allow change of determining in addition to change of determinations? In light of the indeterminacy of the activity involved in grounding [i.e., causing], it is unclear how such change is to be understood other than in terms of changes in the determinate states that the grounds bring about. And if a change of grounds can be understood only in terms of changes in the determinations they bring about, then we would be faced with the issue of what the identity conditions of grounds are. ... If grounds cannot be directly perceived, then the primary basis for asserting that they are changing is removed as well, at least as long as a different interpretation is available. For if one accepted changing grounds, then it would force one to undertake an impossible task, namely explaining why grounds changed in precisely this way at precisely this time, and whatever explanation one gave, it would, so

it seems, have to be in terms of further grounds that either changed or did not, in which case no real improvement would have been made.⁸¹

This is the regress argument that Watkins mentions in parentheses in the quote on page 51. The argument is that if causes could change, then this change would start at a certain moment in time and, in order to explain why the change started at that moment, a cause would have to be invoked. But why did this cause start its causing at exactly this moment? Well, it was determined to do so by yet another cause etc. According to Watkins, this regress argument shows that causes must be temporally indeterminate and unchanging. We can add that this temporal indeterminacy amounts to indeterminacy tout court, because, for the Critical Kant, objective reality and thus determinacy must come from the senses and thus be (directly or indirectly) temporal. It seems to be this argument for the indeterminacy of causes that provides Watkins with the confidence to claim, when confronted with ordinary ways of speaking that do allow for causes to change, that “these ways of speaking require reinterpretation in line with [Kant’s] metaphysical account.”⁸² Thus, Watkins ends up with a certain dualism—which is not a dualism of phenomena and noumena, Watkins holds⁸³—where we have to separate the sphere of changes and determinacy from the sphere of indeterminate and unchanging, i.e., eternal, causes. This dualism is reflected in Watkins’ statement that the Second Analogy has established “that the causal order is more fundamental than or prior to the experienced temporal order.”⁸⁴

Before turning to my criticism of Watkins’ argumentation for the indeterminacy and thus unchangeability of causes, I want to say a bit more about the dualism that Watkins ends up with. The

⁸¹ Watkins 2005: 288. Watkins uses this regress argument also on p.250.

⁸² Watkins 2005: 270. In the passage this quote is from, Watkins talks about ordinary ways of speaking about forces. Given that forces are causes, my quoting does not distort the content, I believe.

⁸³ Cf. Watkins 2005: 256n29.

⁸⁴ Watkins 2005: 207.

source of this dualism is, I take it, to be found in a passage where Watkins draws on a Kant-quote in which Kant says that the real relation of causal interaction is the ground of the ideal relation of simultaneity. In discussing this passage, Watkins claims that an ideal relation is one “that exists merely in thought.”⁸⁵ That is, he takes simultaneity to “exist merely in thought.” Watkins thereby commits yet another error that the mature Kant claims the pre-Critical rationalists are committing. This error consists in his not acknowledging the radical difference between concepts that allow for structuring in genus and species—concepts in Kant’s narrow sense of the term—and (concepts about) space and time. As Kant famously says about Leibniz: “Leibniz intellectualized the appearances.”⁸⁶ Specifically, Watkins fails to acknowledge the distinctive way in which space and time are ideal, namely, as *forms* of all intuition. Once space and time, and thus temporal relations such as simultaneity, are declared to exist merely in thought, it makes sense to search for their real correlate, a correlate that grounds them. It is in light of this conception of ideality, I take it, that we have to understand Watkins’ statement that “the Analogies are arguing that something ontological or metaphysical is required as a condition to ground something epistemological, and that the one can thus be said to make the other possible.”⁸⁷ Thus, Watkins establishes a dualism between the epistemological order with its temporal determinations (which exist merely in thought) and the metaphysical order with its indeterminate and unchanging grounds.

I now want to turn to my criticism of Watkins’ argumentation for the indeterminacy and thus unchangeability of causes. I criticize this argumentation in two ways. First, merely negatively, I argue that Watkins’ account rests on the presupposition of the principle that something cannot be at once determining and determinate, or active and passive. Then, I seek to show that also this argumentation

⁸⁵ Watkins 2005: 199-200.

⁸⁶ B327/A271.

⁸⁷ Watkins 2005: 200.

of Watkins relies on his mistaking a formal principle for a material principle. Regarding the first point, Watkins' presupposing of the principle that something cannot be at once determining and determinate, I want to point out that nothing speaks per se in favor of it save for some surface plausibility. The example of the lightbulb shows that we are in fact well acquainted with cases in which something is both determining and determinate. Watkins' regress argument does not add anything to his presupposing the principle that something cannot be at once determining and determinate, but just spells out that a regress ensues if you adopt that principle as well as the view that causes can change. It is thus not clear at all why this principle should trump our ordinary understanding of causes' being determined, as in the case of the lightbulb.⁸⁸ Furthermore, Watkins' regress-argument is not necessarily a problem for the view that causes can be both determining and determinate. For, the determination of one cause by another cause need not happen *at the same time*. It is true that something must have caused the electric current to flow to the lightbulb, which is the cause of the bulb emitting light. But that is not necessarily a problem. Rather, that there is a regress of causes seems to be an appropriate formal characterization of nature—as Kant himself can plausibly be taken to argue for in the Third Antinomy. It is true that it is explanatorily dissatisfying if a phenomenon is to be explained by a cause, the acting of which is to be explained by another cause, the acting of which is to be explained by yet another cause etc. But this does not mean that this may not exactly be how things are in nature. And, after all, we can still make progress in finding out the workings of nature, even if it is impossible to come to the end of an explanatory chain regarding individual phenomena. (As I will discuss in chapter 4, Hegel even goes so far as to say that a *contradiction* regarding determination—similar to the one that Watkins sees between determining and determinate—is *constitutive* of the basic layer of nature.)

⁸⁸ Watkins may respond to the example of the lightbulb by distinguishing the true cause from connected relational determinations (“circumstances”) and hold that it is only the latter that change. (Cf. Watkins 2005: 270.) This distinction is what makes Watkins depart from the idea that ordinary middle-sized objects such as lightbulbs are substances. I address it below when discussing Watkins' account of causal laws.

Yet, Watkins' argument does not only rest on a principle that does not seem necessary. His argument also contains a manifest mistake—at least by Kant's light. For, also this argument of Watkins' rests on mistaking a formal principle for a material one. Specifically, the argument involves Watkins' not recognizing the way in which the principle of causality is formal. The principle of causality, as we have seen above, is not merely a logical principle, but rather a transcendental one—it is constitutive of experience. Yet, it is still formal in the sense that it “awaits” sensible matter. Different events that we perceive will have different causes, to begin with. Different causes must thus differ at least insofar as they are causes *of different (kinds of) events*. But if causes are indeterminate then they cannot be individuated via their effects, *for that would be a determination*. Thus, if Watkins' really wants to rule out even this kind of determination of causes, then the principle of causality would cease to be a formal principle—in the sense that it depends on sensible matter and thus experience what different causes there are. Watkins' causes are thus separated—by a gulf, as it were—from the realm of sensible matter and thus experience. It is thus unclear what makes them causes *of something sensible*, beyond Watkins' assertion that they are.⁸⁹ Illustrated by means of Watkins' go-to example of mechanistic interaction involving gravitation: if gravity is the cause of the movement of certain bodies, then the gravitational attraction as the cause is in fact determinate, because the strength of the gravitational attraction is determined by the mass and distance of the bodies involved. The cause in this case is thus not indeterminate. And even if mass, distance, and gravitational constant are considered to be mere “circumstances” under which the true cause acts,⁹⁰ the law of gravitation itself is nevertheless determinate insofar as it puts the masses and distances involved into a certain relation to each other. In the case of two bodies, the masses are multiplied and divided by their distance squared. Thus, even

⁸⁹ In the next chapter I will discuss how the habit of simply asserting metaphysical claims leads to the Antinomies of Reason.

⁹⁰ Cf. Watkins 2005: 270.

Watkins' go-to example does not bear out his sharp separation between cause and effect, i.e., between determining and determination.

While this shows yet again that Watkins' account cannot be an account of the Critical Kant, it also brings out a fatal flaw in Watkins' account if considered as a philosophical account in its own right. If a cause is absolutely indeterminate, then we cannot say anymore that it is the cause of something. For, its being the cause of something would render it determinate. Yet, Watkins had argued that a cause cannot be determinate. Thus, Watkins' (somewhat Parmenidean) reasoning to sharply separate determining and determined cannot do what it is supposed to do.

What, methodologically, underlies this sharp separation? It is plausible, I think, to consider it as flowing from a misunderstanding of the causal principle insofar as the cause is construed as a distinct entity, an entity that is radically distinct from the effect by being pure determining without any determination, rather than being determinate—and determinable via the effect.⁹¹ Watkins' sharp separation between cause and effect can plausibly be taken to be an expression of Transcendental Realism. For, Watkins seems to model cause and effect on the case of two separate, external objects—this chair and this duck, say, which are two entities that have *prima facie* very little to do with each other. Thus, Watkins' sharp separation between cause and effect and his resulting view of causes as completely indeterminate can equally be seen as an expression of Transcendental Realism.⁹²

Now, one might think that a conception of causes as thoroughly indeterminate is, at least in light of the considerations just laid out, so unattractive that it can hardly be Watkins' actual view. Thus the question arises whether my characterization of Watkins' account of causes as indeterminate is really accurate. I think it is, which, in addition to the case made so far, I seek to demonstrate by showing

⁹¹ For example, the strength of gravity is measured by observing, in a methodical way, its effects.

⁹² On the topic of Watkins' account of causes as indeterminate, I am indebted to Boris Hennig's incisive review of Watkins' book. (Cf. Hennig 2011.)

how Watkins argues for it via his conception of *causal laws*. Considering this argument also provides the opportunity to spell out further what I take to be Kant's actual account of causality, now with respect to causal laws and their relation to substances.

How does the topic of causal laws connect to the issue of the indeterminacy of causes? We can see how Watkins answers this question if we recall that for him determinacy occurs in the realm of changes, whereas the causes of changes are necessarily unchanging and indeterminate. Watkins now argues for the unchanging nature of causes by holding that only if causes are unchanging can the demand for causal laws to be universal be fulfilled. He argues for this in a way that is by now unsurprising, namely by invoking Kant's pre-Critical philosophy. Thus, Watkins writes the following in response to the question how (his) Kant could respond to the question why causes should be unchanging.

First, Kant might take recourse to the Inaugural Dissertation's idea that substances' natures are general in order to establish that the grounds that constitute them cannot change. The idea would be that if a substance's nature is truly general, then it will hold not only for any substances that are part of the same world to which that substance happens to belong, but also for all times, that is, for all states of all such substances. Accordingly, if a ground were to change at some point between t_1 and t_2 , then the generality of the nature would be compromised. As a result, the generality of natures (or of the grounds that form them) might entail unchanging causal laws.⁹³

The argument is that natures are general and that causes, which are part of the natures of substances, thus must be as well. But true generality implies that causes do not change. Hence, causes must be unchangeable. This unchangeability provides the universality that Watkins takes to be demanded by

⁹³ Watkins 2005: 288.

the concept of a causal law. In this way, Watkins connects the generally acknowledged point that *causal laws* do not change with his claim that *causes* cannot change. After having stated this argument from the *Inaugural Dissertation*, Watkins seeks to combine this pre-Critical argument with the *Critique of Pure Reason*, which he does in the following way.

Second, Kant might have thought that the First Analogy in conjunction with his pre-Critical conception of grounds could support causal laws as well. For if the First Analogy can establish that a substance must be permanent and if it is clear from Kant's pre-Critical account of substances and grounds that a substance is constituted by grounds that are immutable, then it follows that the grounds of a substance must be both immutable and permanent. And if the grounds [i.e., causes] of a substance that bring about change are immutable and permanent, then it stands to reason that such grounds entail causal laws (insofar as immutable and permanent grounds would be the foundation for causal laws).⁹⁴

Watkins thus applies the pre-Critical argument about the generality and hence unchangeability of causes to the First Analogy, whereby the demand is created that a substance be absolutely permanent. However, the application of the pre-Critical argument to the First Analogy does not show that the Critical Kant did in fact subscribe to that argument. For, the permanence that is at issue in the First Analogy need not be taken as absolute.⁹⁵ What Watkins shows is only that a certain coherence between the pre-Critical argument and the *Critique of Pure Reason* is possible: the generality of natures and causes can be connected to the *permanence of substances*.⁹⁶ Yet, what these two quotes do show is that Watkins

⁹⁴ Ibid.

⁹⁵ Watkins cites a passage from B250/A205 as “unambiguous textual evidence” that also the Critical Kant held the view that grounds—and thus causes—are unchanging. (Watkins 2005: 251.) However, the topic of the paragraph from which that passage is extracted is persistence (Beharrlichkeit), which is a concept that Kant connects to perception (cf. B225/A181); and persistence can very well be understood as only relative. That is, something that persists right now may only persist for a while and need not persist forever.

⁹⁶ This connection will be important for my discussion of Watkins' Transcendental Realism regarding scientific demands below.

does indeed think that causes must be absolutely immutable, which means that they must be absolutely indeterminate.

It is important to mention that Watkins advances these arguments in order to argue for the existence of causal laws, that is, in order to argue against the Humean idea that something happening now is disconnected from what will happen in the future. I completely agree with Watkins' desire to show that this Humean idea is wrong-headed. Yet, and this is the fateful step, Watkins connects this issue with the issue of an alleged absolute permanence, i.e. perennial existence, of grounds and then substances. But why could causal laws not hold universally for all and every object('s activity) they describe while these objects may cease to exist? Regarding the idea that the lightbulb as the cause of light could change and that the Second Analogy could be understood in this way, Watkins writes that "the argument of the Second Analogy, so understood, establishes only that a ground cannot change *while it is determining successive states in an object*, and not that a ground cannot change *at all*, which is what would be required in order to establish causal laws."⁹⁷ In response to that argument I want to say that it is not clear to me why there could not be causal laws that govern the activity of lightbulbs and that, *in some sense*, these causal laws would cease to exist should it happen that there are no lightbulbs anymore. These causal laws would cease to exist in the sense that nothing in the universe would then be governed by them. On such a view, Watkins' account with its sharp separation between causes and effects and its dualism between the causal order and the experienced temporal order would be overcome. Given the systematic and textual problems of Watkins' account, this seems to be the more attractive route to go.

⁹⁷ Watkins 2005: 287.

VI. Transcendental Realism and Idealism about the Permanence and Universality of Causally Acting Substances

We have seen how Watkins' account has highly unattractive if not untenable consequences and that Watkins' own go-to example of gravitational attraction seems to be incompatible with it. There is, however, a further interesting dimension to Watkins' pre-Critical argument for causal laws and this argument's application to the First Analogy, a dimension that will bring a further facet of Transcendental Realism and an interesting feature of Transcendental Idealism into view. This interesting feature is the concept of an *idea*, in the technical sense that Kant gives that term in the *Critique of Pure Reason*. The correlated further facet of Transcendental Realism is to conceive of ideas as if they were concepts with direct and determinate objective reality. This feature and facet are implied by Watkins' conception of causal laws as residing in absolutely universal and immutable natures *and substances*,⁹⁸ because this conception is indeed a *demand* that is established in the Analogies of Experience. I now want to argue that Watkins' mistake in asserting the reality of absolutely universal and immutable natures and substances flows from his not recognizing this demand as a demand; and his instead construing a demand as something that is already realized, appearances be damned. This is a typical case of a mistake that the mature Kant charges pre-Critical metaphysicians with making: mistaking ideas, in Kant's technical sense of the term, for concepts with direct and determinate objective reality.⁹⁹ Watkins account of causal laws in relation to the First Analogy is interesting not only because it shows his committing this mistake, but also because it gives us a decisive hint as to how said demand, a demand for generality, is created; namely, by bringing in the topic of the

⁹⁸ Ultimately, the demand for universality and immutability entails that there is only one true substance, not many substances.

⁹⁹ Cf., e.g., B397/A339, B536/A508.

permanence of substances. I first lay out how I think this demand for causal laws arises and then how exactly Watkins takes a mere demand to be already realized.

I have laid out before, centrally in section II, how I think Kant establishes that events must have a cause. They do so, because otherwise we could not take the order of perceived states to be objective and thus determinate. The Second Analogy thus brought to reflective consciousness how we can have knowledge of perceived changes, while the First Analogy does this for the question of how we can have knowledge of (relatively) persisting objects, which Kant calls substances. The result of the First Analogy is that every change is the change of states, or accidents, of a substance. We can now imagine a cognizer who collects what events there are and what causes these events have. This person observes a stone heating up. This is a change of which this person knows that it must have a cause from which the perceived change follows with necessity. Repeating her observations systematically, controlling for all kinds of circumstances, she can make her abstract knowledge that there has to be a cause more concrete: this stone, and all kinds of stones, heat up when shone upon by the sun. This is a causal law. For, as long as the perceived change can be brought under a concept, the Second Analogy tells us that whenever we encounter *such* a change in a stone, it must be the same cause that brought about this change.^{100, 101} Also a lightbulb changing from off to on is subject to causal laws, causal laws that spell out *how exactly* the change in the lightbulb from off to on comes about once the cause (flipping the switch) occurs—or is “posited”, to use Kant’s technical vocabulary.¹⁰² This is how I would construe how the concept of a causal law can be derived from the Second Analogy. Note that the existence of a cause and the necessity with which the event is taken to follow from the cause (when the cause is

¹⁰⁰ A lot depends on what counts as “such changes”, however.

¹⁰¹ That is, Hume’s skepticism about events being connected to future events rests on a skepticism about our being able to reliably subsume objects under concepts. It seems to me that such a Humean skepticism is also underlying the debate among Kant-scholars whether Kant subscribes to the “same cause, same effect”-principle. (Cf. Buchdahl 1969: 649-50.)

¹⁰² For Kant’s usage of “positing”, cf., e.g., B246/A201.

posited) are presuppositions of knowledge of events. Yet, there is a certain demand that has purchase on our cognizer to make this abstract knowledge concrete, i.e., to find out what exactly the causes for certain (kinds of) events are and how exactly these causes bring about their effects. We can call this demand a *scientific demand*, for it is a demand that holds for people interested in coming to know the world.

Following this demand, our cognizer comes to know that not only stones are heated up by sunshine, but other objects as well, and that stones can also be heated up by other causes such as fire or rubbing. Such knowledge is the result of finding causes of events and relating knowledge of some causes to knowledge of other causes. Thus, more general concepts such as “heat source” can be formed and the causal mechanisms related to these more general concepts can subsequently be deliberately investigated. Now consider the case of our cognizer investigating the change that a lightbulb undergoes when placed in a furnace. Evidently, this is a change in which the lightbulb ceases to exist, which is why it cannot be called a change *of* the lightbulb.¹⁰³ As per the First Analogy, this change must nevertheless be a change of some substance. In this case, we can take the melting of the lightbulb to be a change of the material the lightbulb is made of. Note that the fact that a lightbulb can go out of existence while its material continues to exist creates the sense that the material is, in some sense, more fundamental than the lightbulb. This is relevant for the inquiry into nature, as the striving towards greater generality that is part of the scientific demand finds satisfaction when more general concepts are formed—more general concepts that allow for investigating into the causal mechanisms and laws involved.

Kant expresses this “striving towards greater generality” by saying that it is “the law of reason” to seek unity among appearances and he says that “the law of reason to seek unity is necessary, since

¹⁰³ Kant points this out at B230/A187.

without it we would have no reason.”¹⁰⁴ That is, striving towards generality, i.e., seeking unity among all the appearances we experience, just is what it means to use reason in relation to theoretical, empirical knowledge. Given that the causality of a substance is called “power”,¹⁰⁵ one way in which we can seek unity among appearances is by assuming there to be a “basic power” which unifies all powers. It is only by employing this assumption, i.e., by employing the “idea of a basic power”,¹⁰⁶ that we are able to unify any powers at all. It is only through this assumption that we can, for example, unify the power of the sun to warm up stones as well as its power to warm up lizards, or its power to warm up stones as well as its power to illuminate stones. Regarding Watkins’ argument for causal laws, it is relevant to emphasize that the concept of a basic power that we have to employ in order to unify powers is *merely an idea*. An idea in Kant’s technical sense of the term is an imaginary end-point of scientific inquiry that guides us but that is *necessarily unrealizable*.¹⁰⁷ Kant says that we can conceive of an idea as a “focus imaginarius”,¹⁰⁸ which we only ever approach asymptotically. Ideas thus do not have the objective reality of a real object and it would be a mistake to theorize about them as if they would denote a real object.

We can now get Watkins’ Transcendental Realism regarding causal laws and the natures of substances into view by returning to the case of our cognizer inquiring into lightbulbs melting down. The fact that the material of the lightbulb—aluminum, plastic, glass, say—persists while the lightbulb perishes suggests that our striving for generality finds satisfaction to a higher degree when we state the laws that govern the powers of aluminum, plastic, and glass than when we state the laws that govern lightbulbs. Let us assume that the powers of lightbulbs, toaster ovens, radiators, and

¹⁰⁴ B679/A651.

¹⁰⁵ B676/A648, B249-50/A204.

¹⁰⁶ B677/A649.

¹⁰⁷ B672/A644.

¹⁰⁸ Ibid.

loudspeakers can be unified in the powers of the fundamental material of these substances, and that the powers of these fundamental materials can in turn be unified in one basic power. All powers of the more complex substances would then be explainable by means of the one basic power and by taking the circumstances into account under which the basic power acts in one or the other way. The activity of a loudspeaker would then be explained by means of the activity of the basic power under certain circumstances and the activity of a lightbulb by means of the activity of the basic power under other circumstances. The causal law that describes the activity of this basic power would thus have way more generality—in Watkins' sense of 'wider applicability'—than the ones that describe the activity of the powers of lightbulbs and loudspeakers. This story of the basic power of lightbulbs, toaster ovens, radiators, and loudspeakers thus illustrates the demand for universality that Watkins takes to be intrinsic to causal laws.

Note how the causal law that describes the activity of this basic power satisfies the scientific demand for generality, but that this demand can be taken to have its footing, as it were, in the First Analogy. For, the basic power would be the basic power of a basic substance, a substance that is present in a wide variety of circumstances. This wide variety of circumstances would provide for the activity of loudspeakers, lightbulbs, etc., The basic substance would thus persist throughout a myriad of changes from the one to the next to the next of these circumstances. The scientific demand for generality is thus connected to the scientific demand for a universally persisting substance, the latter being a demand that follows from the First Analogy in conjunction with the Second Analogy and the fact that perceptible substances can perish.

Taking the points from the last two paragraphs together, we can state that the causal law that describes the activity of said basic power would not only satisfy the scientific demand for generality but also approach fulfilment of the demand that Watkins placed on causal laws and substances. For, Watkins invoked the point from Kant's *Inaugural Dissertation* that natures (of substances) are to be

general and thus must not change. However, the mature Kant holds that the generality in question is *not* one that is *already realized*; rather, striving towards it is part of the scientific demand. The generality that Watkins takes to be part of the concept of a causal law is for the Critical Kant part of the ideas that guide our scientific research without ever being realized.¹⁰⁹ Watkins wants to argue against Hume that there are indeed causal laws. Watkins thus takes his conception of causal laws, which is connected to the concept of a basic power, to have reality. But, once again, his invoking arguments from the pre-Critical Kant makes him miss Kant's Critical turn, according to which the concept of a basic power and the concept of a universally persisting substance are mere ideas. While I agree with Watkins that Kant does hold that there are causal laws, the mature Kant does not argue for them in the way Watkins suggested.

Taking a demand within science, a mere idea, to be realized is one of the main expressions of Transcendental Realism. Kant deals with this expression of Transcendental Realism in all of the Transcendental Dialectic of the *Critique of Pure Reason*; the Antinomies in particular he considers to be an indirect proof of his mature position, Transcendental Idealism.¹¹⁰ However, also regarding the topic of our striving for generality and the idea of a basic power it is helpful to have Watkins' Transcendental Realism in view. For, when we do so, we increase our understanding of what Transcendental Idealism is through the contrast to the way in which Watkins thinks along the lines of Transcendental Realism. We have seen that Watkins' contention that true substances and their natures are unchanging is ultimately an expression of Transcendental Realism. This indicates that according to Transcendental

¹⁰⁹ It may thus not be a coincidence that Watkins, when introducing the concept of a basic power, does not cite the passages from the *Critique of Pure Reason*, which are part of Kant's discussion of ideas, but rather cites a lecture of Kant's on metaphysics, a lecture that is customarily called "Metaphysics Mrongovius". (Cf. Watkins 2005: 264.) Yet, even the passage that Watkins quotes does contain a reference to the scientific *demand* to reduce all powers to a basic power and does not claim that such a basic power actually exists.

¹¹⁰ Cf. B534/A506.

Idealism, substances are only relatively and not absolutely unchanging.¹¹¹ This indication finds confirmation in the point that for the Critical Kant, what is real is not determined by untethered metaphysical conceptions that go beyond sensibility, but rather by experience. There may be—and indeed there is—a rational demand for the concept of a universally persisting substance. However, this concept is a mere idea, whereas actual substances are to be found in experience. That they are “only” relatively unchanging does not disqualify them from being substances, but is rather the mark of their reality. Furthermore, Watkins’ fateful connection of the universality of causal laws with the persistence of substances, i.e., his assumption that we can only speak of causal laws if they are universal in the sense that only eternal substances act according to causal laws, turned out to be an expression of Transcendental Realism. Real causal laws involve necessity and are universal regarding the cases they cover without being absolutely universal in the sense that they cover every case there is. We can thus take Transcendental Idealism to allow for our attributing causal laws to perishable substances such as rocks and lightbulbs—while acknowledging that there is a scientific *demand* to find a more general causal law that unifies such more specific causal laws.¹¹² Importantly, we have seen that the universality of causal laws is not to be confused with the universality of the eternal existence of an absolutely basic substance.

Regarding the centrality of epistemology for Transcendental Idealism we can say the following. As laid out above, Watkins does not think that absolutely unchangeable substances and the causal laws that describe their powers can be cognized by means of temporal determinations. Nevertheless, he

¹¹¹ Watkins himself acknowledges that Kant’s actual arguments do not support the conclusion that natures and grounds have the generality that he thinks they must have in order for causal laws to be possible. (Cf. Watkins 2005: 290n64.)

¹¹² Also Daniel Warren misses this point when he—in his otherwise very helpful article on the representation of space—writes: “The category of substance that Kant associates with the notion of permanence is not merely that of something that is temporally extended, but rather of something that must always have existed and always will. It is only this less modest idea that Kant thought capable of undergirding the kind of conservation laws he saw in science.” (Warren 1998: 196n22.)

holds that such substances and causal laws must exist—in order to explain the “merely ideal” passing show we perceive. For the mature Kant, on the contrary, our cognition of what is real is cognition of—and by means of—temporal determinations. Yet, our cognitive endeavor is guided by the idea of a permanent substance and basic power. As laid out in the previous sections, Kant holds that we must take an event to have a cause. Until we make that abstract principle concrete by figuring out what the cause of a given (kind of) event is, it is undetermined what this cause is. I thus agree with Watkins’ statement that the “Second Analogy ... leaves completely undetermined what the cause of the succession of states might be.”¹¹³ Yet, I think that Watkins took a wrong turn when he moved to spell out that causes are undetermined in terms of radical indeterminacy and unchangeability of causes.

We have thereby achieved a robust understanding of Transcendental Realism—though more is to be said about it, especially about the Antinomies of Reason, which are the topic of the next chapter. I want to end this chapter with a brief section on Transcendental Realism in relation to philosophical method. For, it is striking how Watkins’ model of “grounding the order of temporal determinations in the causal order” works by means of the principle that “X is explained by/grounded in Y”, a principle that seems to give rise to a regress when the question is asked in what the explanans is grounded.

VII. Kicking the Can Down the Road – Transcendental Realism Regarding Philosophical Method

In this final section, I lay out how Watkins’ adoption of the principle “X is grounded in Y” regarding philosophical justification, a further expression of Transcendental Realism, leads him to ultimately ground metaphysics in an indeterminate, unknowable God. This consequence can be avoided if it is recognized that Transcendental Idealism entails that philosophical cognition has the

¹¹³ Watkins 2005: 223.

form of self-determination rather than the form of determining or grounding one thing, X, in another, separate thing, Y.

As I laid out in the previous two sections, Watkins considers the epistemic order of temporal determinations to be grounded in the metaphysical order of indeterminate causes. He considers this a philosophical insight. With respect to philosophical method, Watkins thus follows here the principle that “X is explained by/grounded in Y”. Given that this seems to be Watkins’ methodological principle, it is not surprising that he sooner or later has to wonder what explains or grounds the metaphysical order of indeterminate causes. And indeed, Watkins asks: “if the argument of the Analogies presupposes that *temporal* relations need a ground, does it not follow that *causal* relations would need a ground as well? And if so, what could that ground be?”¹¹⁴ Watkins thinks that there is indeed such a further ground. Drawing once more on Kant’s pre-Critical writings, Watkins invokes the *Nova Dilucidatio* and points out that its “argument for the principle of coexistence [of mutually interacting substances] in particular turns on the idea that only God could relate substances to each other in such a way that they could interact causally.”¹¹⁵ Watkins thus invokes God as the ground of the order of causes. To the objection “that Kant provides detailed objections to the three traditional theistic proofs and explicitly argues that God is not an object of possible experience,” Watkins responds by saying that “the fact that we cannot *know* that God exists does not imply that God could not *be* the ground of the causal relations between substances.”¹¹⁶ While this is a further expression of Watkins’ not considering epistemological considerations to be relevant for metaphysics, what I am interested in now is that Watkins here again reasons by means of the methodological principle that X

¹¹⁴ Watkins 2005: 294.

¹¹⁵ Ibid.

¹¹⁶ Watkins 2005: 294-5.

is grounded in a separate Y. Specifically, the causal order is for Watkins grounded in an unknowable God.¹¹⁷

I submit that Watkins' methodological principle is yet another expression of Transcendental Realism. For, his methodological principle does not take into account that transcendental cognition is self-knowledge, i.e., has the form of self-determination. As self-knowledge, transcendental cognition consists in reason reflecting on itself: critiquing¹¹⁸ itself by inquiring ($\kappa\rho\iota\nu\epsilon\iota\nu$) into itself, distinguishing (another meaning of $\kappa\rho\iota\nu\epsilon\iota\nu$) the source of its concepts, and thereby adjudicating and deciding (a further, related meaning of $\kappa\rho\iota\nu\epsilon\iota\nu$) the dispute within itself. We saw above, especially in section II, that determining how the relevant concepts must hang together so that theoretical, empirical knowledge is possible occurs by unfolding the unity of consciousness, in its relation to concepts such as knowledge, objectivity, object, change, etc. For example, the unification of perceptions of different states of an object occurs by taking these perceptions to be objective. And to do so involves to take the perceived change to have a cause. When this is laid out, it is not that there is one concept which we already understand perfectly and are just looking for some other, distinct concept in which the first concept is grounded. Rather, all the concepts involved in transcendental critique hang together and are illuminated jointly or holistically—by the whole of reason determining itself.¹¹⁹ Transcendental

¹¹⁷ Watkins does not consider this a problem, but rather thinks that this is exactly what we should expect from the Critical Kant. For, “in line with the (theoretical) agnosticism about things in themselves required by Transcendental Idealism, one can simply admit that we cannot know what the ultimate ground of causal interaction is.” (Watkins 2005: 295.)

¹¹⁸ The word “critique” comes from the ancient Greek work $\kappa\rho\iota\nu\epsilon\iota\nu$.

¹¹⁹ This can be seen in how topics that Kant discusses later in the *CPR* are intrinsically connected to topics he discusses earlier. For example, at B160-1n Kant discusses how the understanding is essential to the unity of space and time, which were discussed in the Transcendental Aesthetic. (For a helpful discussion of this point and the interdependence of Transcendental Aesthetic and Analytic, cf. Conant 2016.) Or at B679/A651, Kant states that without reason—the explicit topic of the Transcendental Dialectic—there would be no coherent use of the understanding, which is the explicit topic of the Transcendental Analytic. This also happens within the Transcendental Analytic: the Principles of the Understanding spell out in what the objective unity of consciousness—the explicit topic of the Transcendental Deduction—consists, while being equally dependent on the objective unity of consciousness in order to be understood. A transcendental realist such as Watkins ignores this intrinsic connection between the Principles and the Deduction. For, Watkins thinks that epistemological issues merely provide an occasion for laying out the metaphysics for the topic at hand.

cognition is thus an internal articulation of reason itself. On Watkin's account, philosophical justification or grounding happens by means of the principle that an explanandum is grounded in an explanans, i.e., that X is grounded in something different, Y. Explanandum and explanans are thus conceived along the model of external, empirical objects—as we have seen in the last sections regarding cause and effect. When philosophical justification or grounding is understood in this way, then nothing prevents the re-application of the principle, so that we have to ask what grounds the ground or what explains the explanans. The causal order is the ground of the temporal order; this raises the question what the ground of the causal order is. Watkins stops the looming regress by employing God as the ground of the causal order, whereby the regress is stopped—because God is unknowable. This fits what Watkins says about the notion of a determining ground: “Kant's general model of causality employs the notion of ... a determining ground, which cannot be explained by anything external to itself, since qua determining ground it is not determinable, that is, cannot be determined by anything other than itself.”¹²⁰ In this rare passage Watkins does approach the topic of self-determination. However, if God is the determining ground of the causal order and if God is unknowable to us, then the self-determination of God has nothing to do with us or our philosophical knowledge. God's self-determination only works as a regress-stopper, and it does not connect to the self-determining form of transcendental cognition.

Thus, with respect to philosophical method, Watkins also thinks along the lines of Transcendental Realism and conceives of the objects of philosophical knowledge as if they were external, empirical objects that are spatiotemporally separate from each other. Furthermore, that God stops the regress is something we simply have to accept—just as there are brute, empirical facts that we just have to accept. We cannot understand how God's self-determination works and thus how God stops the

¹²⁰ Watkins 2005: 359.

regress, because God is unknowable. We thus cannot understand why there might not be something else of which we cannot have knowledge that is the ground of God. According to Transcendental Idealism, on the contrary, there is no dualism between the temporal, epistemic order and the causal order. Thus, the question of what grounds the causal order cannot even arise. Rather, the “ultimate ground” is reason, in which the relevant concepts hang together holistically and ground each other jointly, which is something that we come to see by reason—our reason—determining itself.

Conclusion

The aim of this chapter was to illuminate Kant’s conception of causation as argued for in the Second Analogy by giving a robust account of Transcendental Realism. As far as I can tell, it has only partly—and not sufficiently—been taken into account in the contemporary Kant scholarship how wide-spread Transcendental Realism is, how far-ranging its implications are, and, thus, what its significance is. I sought to bring into view the specificity of Transcendental Idealism, the position we achieve when we bring about the revolution in the way of thinking that is the subject matter of the *Critique of Pure Reason*, through the contrast to Transcendental Realism. I argued that this specificity involves the centrality of epistemology, which I sought to bring into view through the contrast to Strawson’s and Watkins’ dogmatism regarding the concept of an event and the connected external view they assumed onto the subject matter of events. True metaphysics involves that we reflect on all metaphysical concepts, by asking how cognition through them is possible. We get into view how Kant actually argues in the Second Analogy when we do not presuppose that we can tell whether an event occurs or not. There, Kant argues by pointing out that an objective succession must have a cause, because the cause is what accounts for the objectivity of the succession. In this, the cause is the connection, as it were, of the succession to objectivity. Thus, only if we take a perceived change to

have a cause can we have knowledge of events. The centrality of epistemology for metaphysics is visible in the point that only of things that we can have knowledge of can we claim that they exist.

The centrality of human experience for metaphysics brings into view in what way Kant is a **determinist**. He holds that we must take everything that happens to have a cause from which it follows with necessity. (Note that in calling this view ‘determinism’, I seek to connect to the contemporary usage of that term. Kant uses that term differently, only in relation to the human will.¹²¹) Yet, Kant’s experience-centered account involves that the concept of a cause is dependent on perceived and perceivable changes; it awaits “enmatterment” or “saturation” through sensibly given material. Contra Watkins, a cause is universal and brings about its effects with necessity, even though it is not absolutely universal in the sense of governing absolutely all cases. Only a most fundamental substance, endowed with the most basic power, would fulfill that demand for absolute universality. Yet, according to Transcendental Idealism, the concepts of a basic power and of an eternal substance are *ideas*, i.e., imaginary endpoints of scientific inquiry that guide us but that we can never reach. We have seen how it is yet a further expression of Transcendental Realism to take ideas to be real, to conceive of them as if they were concepts that have objective reality in a direct and determinate way. According to Transcendental Idealism, on the contrary, *empirical* concepts are the paradigmatic concepts with objective reality, concepts that have objective reality in a direct and determinate way. Besides the already mentioned facets of Transcendental Realism—dogmatism, neglect of epistemology, adoption of a fictitious view from nowhere, and taking ideas to have reality—I have also argued that it is a facet of Transcendental Realism to take empirical concepts as the model for the concepts of transcendental cognition. I have argued that Watkins does this regarding the concept of a cause and regarding the relation of causes to their effects, which leads to his dualism between a

¹²¹ Cf. *Religion-Essay*, VI:49n.

“merely ideal” order of epistemologically accessible, temporal determinations and an underlying, metaphysical, “prior” order of indeterminate causes. Furthermore, Watkins conceives of the way in which the principle of causality is grounded on the model of grounding an empirical case or principle in a higher, more general empirical principle. This leads him to ground the principle of causality in the principle of sufficient reason. Thereby, Watkins conceives of the PSR as if it were a contentful, metaphysical principle, which is the typical error of pre-Critical rationalists, as Kant points out in his polemic against the Leibnizian Eberhard.

Finally, the philosophical method that Watkins adopts turned out to be a further facet of Transcendental Realism. For, Watkins’ conceiving of ground and grounded as distinct entities that stand in an asymmetrical relation to each other leads to a regress. Watkins stops this regress by a further expression of Transcendental Realism, namely, the employment of an unknowable God, about which no further questions are possible—just as no further questions are possible about a brute fact. The contrast to this transcendently realistic conception of philosophical method brought into view how transcendental cognition and critique are for Kant cases of self-knowledge. This kind of cognition is not knowledge of external objects, but rather purely rational self-knowledge, which consists in reason determining itself by critiquing itself. In this way, I sought to lay out the wide-ranging implications of Transcendental Realism, so that Kant’s revolution of our way of thinking can better come into view.

Regarding the topic of the dissertation as a whole, this chapter discussed the centrality of causation to Kant’s conception of nature and in what way Kant’s conception of causation is often misunderstood. In the next chapter, I discuss how misunderstanding Kant’s conception of causation and thus nature along the lines of Transcendental Realism leads to the view that there cannot be freedom in nature as well as that there must be freedom in nature, even though we cannot understand how. This is the view that Kant addresses in the “Third Antinomy of Reason”. More specifically, Kant

says that said view arises because we naturally misunderstand reason's employment of ideas. The discussion of the idea of an absolutely permanent and universal substance in section VI of this chapter has already laid the groundwork for this discussion, as well as for the discussion of the antinomy about organisms in chapter 3 of this dissertation. There, the issue of the universality of an eternal substance and of a basic power comes up again in the form of the idea of nature as thoroughly unified. Recognizing this concept to be a mere idea is central, I argue, for the resolution of that antinomy, which allows us to recognize teleology and mechanism to stand in a form-matter unity regarding organisms. Finally, section VII of the present chapter provides the basis for my discussion of Hegel's method in the *Science of Logic*, a discussion that I carry out in chapter 4 by going through the example of the Mechanism chapter of the *SL*. For, the rejection of Transcendental Realism regarding philosophical method brings into view why Hegel argues in the difficult and idiosyncratic way that the *Science of Logic* is infamous for.

Chapter 2

Determinism and Predeterminism:

A Hylomorphic Reading of the Third Antinomy

“If we would give in to the deception of transcendental realism, then neither nature nor freedom would be left.” – B571/A543

“[W]ithout matter nothing at all can be thought.” – B284/A232

Introduction

In the last chapter, I discussed Kant’s account of causation as argued for in the Second Analogy of Experience. I argued that experience and hence epistemological concerns are for Kant essential to properly do metaphysics. I sought to bring this account into view by discussing Transcendental Realism, which Kant considers to be the root-cause of the errors of his early modern predecessors. I argued that also influential Kant-interpreters from the 20th and 21st century think along the lines of Transcendental Realism, and discussed Strawson’s and Watkins’ account of the Second Analogy in order to make this case. While I argued that, in general, Transcendental Realism consists in conceiving of transcendental cognition on the model of empirical cognition, Strawson’s and Watkins’ readings of the Second Analogy figured as examples for what more concrete consequences this bad model has. Central among these more concrete consequences are: their uncritically availing themselves of the concepts ‘event’ and ‘cause’, their sharply separating metaphysics and epistemology, and their arguing from a fictitious view from nowhere. This fictitious view from nowhere is directly discussed and criticized by Kant in the Antinomies of Reason.

In this chapter, I seek to bring out how Kant criticizes said fictitious view from nowhere and what Kant’s positive view looks like. My general approach to that topic consists in the following. In order

to get Kant's positive account into view we have to take his using the concepts of form and matter seriously and, consequently, that we have to understand "nature" as a formal concept, which is only made concrete through sensibly given matter. I lay out how reflection on Kant's account of changes and thus causation leads to the concept of nature, and how the Third Antinomy lays out our natural misunderstanding of this concept. This natural misunderstanding consists in conceiving of this concept as having objective reality in a direct and determinate way. Doing this, i.e., conceiving of concepts that are ideas—in Kant's technical sense of the term—as having objective reality in a direct and determinate way, is another hallmark of Transcendental Realism. (Section I) I furthermore discuss how, according to Kant, Transcendental Realism lies at the bottom of the problem of free will, and how Kant addresses this problem in the Third Antinomy of Reason. I draw a distinction between determinism and predeterminism, which is, I hold, central to understanding Kant's resolution of the problem of free will and, thus, his positive account of causation and nature. (Section II) Finally, I seek to bring my reading into sharper relief through the contrast to some recent interpretations of Kant's view on said matters. I argue that Nick Stang's and Ian Proops' accounts of Kant's concept of nature are an expression of Transcendental Realism because they endorse predeterminism. Henry Allison and Lucy Allais have a better view, I hold, insofar as they take Transcendental Idealism to entail an open future. Yet, I argue, their thinking exhibits Transcendental Realism insofar as they conceive of Kant's concept of a "thing in itself" as "reality itself", a reality which we are barred from accessing. I submit that a hylomorphic reading, as spearheaded by Robert Pippin, helps to overcome these problems and to get Kant's actual position into view. (Section III)

I. The Development of the Formal Concept of Nature out of Reflection on Change

In the previous chapter I laid out how Kant argues that whatever happens in nature has a cause. Ice melts because of increased temperature, rocks fall down a cliff because of gravity, glasses *get*

toppled over, and we perceive by means of light rays/particles *causing* a change in our retina. Kant captures—and seeks to philosophically justify—this ordinary understanding by arguing that we can only conceive of a change as objectively occurring by considering that change as caused. This is so because only the causal connection *to the rest of nature* allows us to conceive of the change at hand to occur objectively, rather than being a figment of some mind.¹ By contrast, it is, e.g., in dreams that what “happens” is not causally connected to what happens else in the dream. Hence, Kant can be called a *determinist* with respect to events insofar as he holds that every event must have a cause from which that event follows with necessity.

Furthermore, that a causal connection to the rest of nature exists is something we claim by means of a judgment.² That is, experience of an event constitutively involves a judgment about the cause of that event.³ Only in this way, Kant claims, can a distinction be made between the experience of an event and a mere aggregate of perceptions:

For the reader who is stuck in the long habit of taking experience to be a mere empirical combining of perceptions – and who therefore has never even considered that experience extends much further than these reach, that is, that experience gives to empirical judgments universal validity and to do so requires a pure unity of the understanding that precedes *a priori* – I ... recommend: to heed well this distinction of experience from a mere aggregate of perceptions...⁴

¹ Cf. B218-24/A176-81; B232-56/A189-211.

² Cf. B246-7/A201-2.

³ Cf. B244-7/A199-202, especially B247/A202, where Kant says that a determinate temporal order of appearances “is the condition of the objective validity of our *empirical judgments* with regard to the series of perceptions, thus of their empirical truth, and therefore of *experience*.” (My italics.) Cf. also *Anthropology*, VII:141, where Kant says that experience is empirical cognition and thus rests on consciousness of the unification of the manifold of representations, thinking, concepts, and judgments.

⁴ *Prolegomena*, IV:310.

In this way Kant justifies our ordinary understanding that glasses do not just topple over by themselves but that something makes them topple over and that ice blocks do not melt by themselves but rather due to an increase in temperature, say.

Note that the quote involves the claim that experience, as Kant understands it, “extends much further than” perceptions. Through objectivity claims, i.e., through experience, we have a conception of what goes beyond our immediate perceptions. The principle of causality and the other Analogies of Experience are the forms of experience, which are “enmattered” in our experience. This gives us a formal concept of nature:

By nature (in the empirical sense) we understand the connection [Zusammenhang] of appearances as regards their existence, in accordance with necessary rules, i.e., in accordance with laws. There are therefore certain laws, and indeed a priori, which first make a nature possible; the empirical laws can only obtain and be found by means of experience, and indeed in accord with its original laws, in accordance with which experience itself first becomes possible. Our analogies [of experience] therefore really exhibit the unity of nature in the combination of all appearances ... Thus together they say: All appearances lie in one nature, and must lie therein, since without this a priori unity no unity of experience, thus also no determination of the objects in it, would be possible.⁵

Kant claims that we can only determine objects if such determinations are connected to the unity of experience and, thereby, to the unity of nature. Above, we saw one instance of this general claim: in order to determine a change, we have to assume this change to be connected to a cause and thus to other appearances. Given that experience involves claims to objectivity, the unity of all experience

⁵ B263/A216, translation amended.

goes hand in hand with the unity of everything objective. That is, the unity of experience gives us a concept of nature.

This concept of nature is merely formal insofar as it leaves open what there is in nature, e.g., what concrete, empirical laws of nature there are. The Analogies of Experience—and Principles of the Understanding more generally—are merely “universal laws, without which the form of an experiential cognition [Erfahrungserkenntnissen] in general would not obtain at all”.⁶ One can say that the conditions of the possibility of experience are the form of experience. Yet, in order to have experience, and not only its form, matter is needed. According to Kant’s two-stem doctrine, this matter has to be given through the senses.⁷

As the epigraph to this chapter states, Kant holds that nature is abolished if we adopt Transcendental Realism. I now want to turn to this claim and explore why Kant holds it, and thereby spell out the point from the previous paragraph. In the last chapter, I argued that Transcendental Realism is helpfully understood as a position about transcendental cognition, namely one that considers transcendental cognition to have objective reality—in the way in which empirical cognition has objective reality, i.e., determinacy. (One could say that the transcendental realist *objectifies* transcendental cognition.) The concrete examples I there discussed were how Strawson and Watkins can be seen as adopting Transcendental Realism about the concepts “event” and “cause”. In his 1982 book *Kant’s Theory of Form*, Robert Pippin spearheaded a reading of Kant that takes seriously and puts center stage Kant’s constant employment of hylomorphic vocabulary.⁸ In line with this reading, the concepts “event” and “cause” can be regarded as *formal concepts*, insofar as they are part of the form of

⁶ CPJ, *Introduction*, V:185.

⁷ B74-5/A50-1.

⁸ Philosophers who followed that lead and endorse a hylomorphic reading of Kant are: Stephen Engstrom, John McDowell, James Conant, Andrea Kern, Sebastian Rödl, Matthew Boyle, Karl Schafer, Alexandra Newton, Thomas Pendlebury, Maximilian Tegtmeier, ...

experience, i.e., insofar as they are constitutive of experience. That is, insofar as there is experience, there are events and causes. Kant has argued in the *Transcendental Analytic* that we can positively determine experience only in such a way that it involves events and causes. Yet, qua being constitutive of experience, “event” and “cause” do not refer, do not have objective reality, in the way in which empirical concepts such as “melting” or “sun” refer or have objective reality.⁹ The concept of nature, now, is similarly related to experience, as argued in the previous two paragraphs. “Nature” can thus equally be regarded as a formal concept. The question how we can understand Kant’s claim that *Transcendental Realism* abolishes nature can hence be understood as a question about how it is that *Transcendental Realism* misconstrues formal concepts, namely, the formal concept of nature. The previous chapter can thus be understood as laying out how *Transcendental Realism* misconstrues the concepts of event and cause, whereas this chapter is devoted to laying out how we misconstrue the concept of nature when we think along the lines of *Transcendental Realism*. In this chapter, I furthermore add the dimension of how such misconstrual is tantamount to misunderstanding Kant’s hylomorphism.

Below, I will turn to the way in which the concept of nature is misconstrued by *Transcendental Realism* insofar as the formality of the concept of *causality* is not understood. This misconstrual, I claim, leads to the so-called problem of free will, which Kant discusses in the *Third Antinomy of Reason*. But I want to begin with a more general reflection on what it means to be subject to the “**natural** and unavoidable **illusion**”¹⁰ of awarding the formal concept of nature with objective reality in a direct and determinate way, i.e., on what it means to be subject to *Transcendental Realism* regarding the concept of nature. This section is merely devoted to a description of *Transcendental*

⁹ The proof of the legitimacy of using the concepts “sun” and “melting” involves pointing to examples. Whereas the proof of the legitimacy of using the concepts “cause” and “event” consists in showing that these concepts are constitutive of experience.

¹⁰ B353-4/A297-8. Cf. also: B397/A339, B433-4/A407, B449/A422, B660/A582, B672/A644.

Realism regarding the concept of nature. Kant's argument against Transcendental Realism is the topic of the next section.

In the quote on above on page 80, Kant characterizes nature as the “connection” or unity [“Zusammenhang”] of appearances regarding their existence. Nature¹¹ is everything that exists taken together. It can thus seem plausible that just as things exist, so nature exists. After all, ordinary questions such as “Is there a pack of eggs in the fridge?” or “Is the team here?” are to be answered in the affirmative when the individual eggs or players are present. Equally, it seems, asking whether a certain pack of eggs or whether a team *exists* is to be answered in the affirmative when the individual eggs or players exist. We can attribute existence to a whole when the parts exist. “Existence” can equally be used with respect to the whole as with respect to the parts. “Is there a team?” and “Is there a player?” are questions that seem to work in the same way. Yet, somewhat similar to the way in which the formal concepts “event” and “cause” have a special status, so the concept of “nature” has a special status in virtue of being a formal concept. A crucial difference between concepts of a whole such as “pack of eggs” or “team”¹² and the concept of nature consists in our not being able to have all parts of nature in perceptual view. We can visually see a whole pack of eggs and a team. And even a whole army can be seen, even if that takes some time or requires a birds-eye’s view. Nature, however, cannot be surveyed in such a way. For, nature never ends. However long we survey and however far we “zoom out”, we will never have all of nature in view.¹³ While the concepts “pack of eggs” and “team” have a corresponding visual representation, i.e., intuition, this is not possible for the concept of nature.

¹¹ Kant makes a distinction between “nature” and “world” at B446-7/A418-9, where “nature” is the dynamical and “world” the mathematical whole of appearances. This distinction is not relevant for the point I want to make here.

¹² I am leaving aside issues such as the following. In the primary case, we can call somebody a player (of a team sport) only when there is a team. Otherwise, the person in question would at best be a potential player.

¹³ There is at least no reason for why this should be possible.

The concept of nature's lacking a corresponding intuition is a central reason for why that concept does not have "objective reality" in the way in which empirical concepts do. The concept of objective reality contains Kant's transformation of the rationalist tradition. About "reality", Christian Wolff writes: "Whatever is or can be conceived, is called a thing [Res], to the extent that it is something. For which reason, reality [realitas] and whatness [quidditas] are synonyms among the scholastics".¹⁴ Kant critiques this conception by holding that without (direct or indirect) relation to the senses, concepts are empty:

If a cognition is to have objective reality, i.e., to be related to an object, and is to have significance and sense in that object, the object must be able to be given in some way. Without that the concepts are empty, and through them one has, to be sure, thought but not in fact cognized anything through this thinking, but rather merely played with representations.¹⁵

A cognition occurs by relating a concept to an object.¹⁶ Hence, concepts have objective reality by being related to a given object. And, qua Kant's two-stem doctrine, this givenness can for us not be rational but must be receptive givenness, a givenness that furthermore is sensible. *Empirical* concepts are related to empirical objects. Now, to assume that the concept of nature has objective reality in the way in which empirical concepts do—as we naturally and unavoidably do—means to miss the formality of the concept of nature, a formality that in the case of "nature" involves that nature is never-ending. Nature is related to objects proper only indirectly, by being the formal concept of the unity of all

¹⁴ Wolff 1736: §243. Quoted at Fugate 2021: 359.

¹⁵ B194-5/A155.

¹⁶ „Erkenntnis aber ist die Vorstellung eines gegebenen Objectes als eines solchen durch Begriffe; sie ist empirisch, wenn das Object in der Vorstellung der Sinne ..., Erkenntnis a priori, wenn das Object zwar, aber nicht in der Sinnenvorstellung (die also doch nichtsdestoweniger immer sinnlich sein kann) gegeben ist.“ – Letter to J. S. Beck, January 20th, 1792. Cf. B118/A85-6.

appearances, i.e., of all objects of contentful, theoretical cognition. Importantly, as our empirical knowledge grows and as our empirical concepts change and grow, there will never be a point where that process of growth would end and where we could say that the sum-total of our empirical concepts is simply identical with the concept of nature. This would do away with the dynamism, as it were, that is inherent to the concept of nature. Kant expresses this by saying that concepts that work like the concept of nature, i.e., ideas, figure as a “focus imaginarius” that we always strive towards but can never reach.¹⁷

Missing this aspect of nature’s form goes hand in hand with the misunderstanding that the concept of nature could be determined independently of the concept of experience. The latter is, according to Kant, the primary mistake of his rationalist predecessors regarding the concept of nature. Descartes or Leibniz try to determine the concept of nature *without properly considering that concept’s relation to experience*. Thus, so Kant, they have “merely played with representations.” Finally, these intertwined misunderstandings give rise to what Kant states in the quote from the epigraph to this chapter: the abolition of nature and freedom.

Said misunderstandings would abolish nature and freedom in the following way. If the concept of nature is conceived of as having objective reality in a direct and determinate way, then nature is taken to be fully determinate in itself, independently of our cognizing activity. This is what it means to be *a transcendental realist regarding the concept of nature*. If nature is conceived in such a way, then it is not the case that the objective reality of the concept of nature grows as we proceed in experience and science. I will say more on this topic below, especially on pages 104 ff. What I want to point out already now is that if nature were a fully determinate causal system, then no other causation than natural causation—i.e. causation where the effect follows with necessity from a given condition—is

¹⁷ B672/A644.

realizable. As an in itself fully determinate system, there would be no significant distinction between past and future, because both would be equally determinate, namely, fully determinate. Yet, if the future is already *determinate*, then it is already *determined*. And if the future is already determined, then freedom and imputability would be rendered illusory concepts—at least in the common understanding of there being some degree of freedom; for example, in that human beings can at least occasionally influence their character and thereby their actions. To think that the future is already determined and that thus future actions are already determined is a position that Kant calls “**predeterminism**”, “according to which actions of a will, as occurrences, have their determining grounds *in the previous time*”.¹⁸ Thus, if the future is already determined, then *freedom* would be abolished. One way in which *nature* would then be abolished is that it would then be inconceivable how we could have access to the concept of nature. For, determinacy enters our mind only through the sensibly given material—as the second quote from the epigraph to this chapter states. A further argument for why nature is abolished if Transcendental Realism is adopted is that the concept of nature is then inherently contradictory, as Kant lays out in the Antinomies of Reason. This argument is the topic of the next section.

The points made in this section allow us, I submit, to understand the following quote from Kant about the formal character of the concept of nature.

If [...] I represent all together all existing objects of sense in all time and all spaces, I do not posit them as being there in space and time prior to experience, but rather this representation is nothing other than the thought of a possible experience in its absolute completeness. In it alone are those objects (which are nothing but mere representations) given. But to say that they exist prior to all my experience means only that they are to be

¹⁸ *Religion-Essay*, VI:49n.

encountered in the part of experience **to which** I, starting with the perception, must first of all progress.¹⁹

The formal character of the concept of nature involves an inherent relation to experience. Kant's claim is that without the relation to experience, we do not understand what nature is.

Yet, the argumentation in this section proceeded on a rather abstract level. In the next sections, I seek to make it more concrete, by going through Kant's argumentation in the Third Antinomy and by illustrating what Transcendental Realism about the concept of nature amounts to, with the accounts of Nick Stang's and Ian Proops' figuring as illustrations.

II. Freedom or Reality?

Transcendental Realism would abolish nature as well as freedom, Kant says. This indicates that, according to Kant, Transcendental Realism lies at the heart of the so-called problem of free will. This indicates, in turn, that overcoming Transcendental Realism, i.e., adopting Transcendental Idealism, means to solve the problem of free will. The transcendental realist conceives of objects in nature as being fully determinate by themselves, where no recourse to sensibility is necessary in order to conceive of them. Objects so conceived are what Kant calls "things in themselves". Hence, overcoming Transcendental Realism means to not conceive of objects in nature as things in themselves. From this it follows to conceive of the concept of the totality of appearances, i.e., the concept of nature, in a formal way. Thereby, that is the promise, the problem of free will is solved. It is along these lines, I submit, that Kant writes the following in the section of the *Critique of Pure Reason* entitled "Resolution of the cosmological idea of the totality of the derivation of occurrences in the world from their causes".

¹⁹ B523-4/A495-6.

...if appearances are things in them selves, then freedom cannot be saved. Then nature is the completely determining cause, sufficient in itself, of every occurrence, and the condition for an occurrence is always contained only in the series of appearances that, along with their effect, are necessary under the law of nature.²⁰

How exactly this solution works is the topic of this section. I start by giving a brief account of the problem of free will, as Kant presents it in the Third Antinomy of Reason.

As discussed in the last chapter, Kant holds that we can only conceive of changes as objectively occurring if they have a cause. Furthermore, it is part of the concept of a cause that the effect follows from the cause with necessity. Otherwise we would not be talking of *the* cause of the event in question.²¹ I want to suggest the following to make this point more clear. When we ask for *the* cause of an event, what is at issue is the specific, particular cause of a particular event. What is at issue is not a general answer as when we ask “Why do stones fall to the ground?” and receive the answer “because of gravity”—even though establishing such general answers is also part of Kant’s concept of experience and science. Rather, *the* cause refers to a specific appearance from which another specific appearance follows with necessity. Furthermore, it is with respect to particular causes that the problem of free will becomes pertinent. For, the problem of free will occurs with respect to particular actions of a person.

In brief, the problem of free will is the following. If a person performs an action, then this action involves a change in the world.²² As such, the action must have a cause from which it follows with necessity.—Just as the warming up of a stone must have a cause from which it follows from necessity,

²⁰ B564/A536.

²¹ This contentious claim can be rendered plausible in the following way, I submit. Given background conditions, there is one cause for an event, which determines that the event in question happens at this and not another moment. More complicated cases are to be understood in light of this primary case. These are cases where, for example, the background conditions are in flux or where, accidentally, two causes bring about an event.

²² Human actions are occurrences in the world, Kant says at VIII:153.

a cause such as sunshine. Yet, the latter kind of cause is a natural cause and thus, according to Kant, does not involve human agency. One popular way to spell this out is that the person in question could have acted otherwise. But if the person could have acted otherwise, then the action cannot have been necessitated by a natural cause. Either the action could have been different or it was necessitated by a natural cause. We thus seem to be confronted with an either/or situation: Either freedom or natural causation. And given Kant's arguing that there is no nature without causation, this amounts to the following exclusive disjunction: Either freedom or nature. This is the problem of free will.

Kant addresses this problem in the Third Antinomy of Reason in the *Critique of Pure Reason*. In that stretch of text, Kant discusses the existing positions at his time and seeks to show that they interminably controvert each other, and hence form a veritable antinomy. These positions are, for one, that natural causation cannot be given up because otherwise the concept of nature would be lost; and then, that causation is inconceivable without freedom and that hence freedom must be real. The former is the position of the antithesis, the latter is the position of the thesis of the Third Antinomy:

Thesis

Causality in accordance with laws of nature is not the only one from which all the appearances of the world can be derived. It is also necessary to assume another causality through freedom in order to explain them. [...]

Antithesis

There is no freedom, but everything in the world happens solely in accordance with laws of nature.²³

²³ B472-3/A444-5.

I want to begin and spend more time with the thesis argument, as it is, I think, less intuitive in our times. The thesis position reflects on causation in the following way. Changes occur at a specific moment—at least more or less. The process of ice melting, for example, sets in at a specific moment and lasts for a certain amount of time. If the cause is *the* cause of the event because it fixes *when* the event occurs,²⁴ then it follows that the causing of the change must itself have set in at a certain moment. It follows in turn that the causing must itself be a change. Whatever happens in nature—Kant calls it a change or an event—is thus caused by something that equally happens.

As will become clear below, it is helpful to present this issue in terms of “conditions”. Kant holds that causes—the acting of which are described by laws of nature²⁵—are a kind of condition. Thus, philosophical inquiry into causation is one way to ask: what is the relation between an appearance and its conditions? Note, however, that one should distinguish between *formal conditions* for an appearance to appear to a subject and *material conditions* of an appearance. Formal conditions can be of different kinds and include sufficiently favourable conditions with respect to lighting, previous knowledge, or brain chemistry, as well as concepts that a cognizer must in general possess in order to be able to know appearances. Whereas asking for a cause in the sense laid out means to ask for a *material condition*. More specifically, it means to ask for a materially saturated condition *in the world*, i.e., for another appearance that is the condition of the appearance in question.

As stated above, if events occur at a specific moment in time, then the causation of one event must equally have started at a specific moment in time and hence the cause doing its causing is equally an event. As such, it must also have its cause. And this cause of the cause must equally have started its causing at a specific moment in time, hence have its cause, and so on. Kant expresses this point

²⁴ Cf. B243/A198, Longuenesse 1998: 361-8.

²⁵ Cf. Stang 2016: 216; cf. B263/A216 in combination with: B249/A203-4, B245-6/A200-1, and A113. Cf. also IV:467.

nicely in the following reflexion: “If something happens, then it must have a cause. However, the causality of the cause is equally something that happens. It thus must have a cause in turn, and so on in infinity.”²⁶

Consider an example again. An event, the melting of an ice block, say, could not have occurred without its condition being in place: sun rays hitting the ice. The same holds for the event of these sun rays hitting the ice. That is, there could not have been any sun rays hitting the ice had these sun rays/photons not been emitted from the sun at the particular moment and in the particular way they were emitted. The particular sun rays/photons could, in turn, only have been emitted at that moment in that particular way if the condition for that happening was in place: the fusion of the specific hydrogen atoms that emitted the photons/sun rays, say. These specific hydrogen atoms had to be in the very place they were for the fusion to occur in the exact way in which it occurred, which means that they must have been deposited there in the first place.²⁷ This deposition needs a cause in turn, and so on.

The thesis position now reflects on this ‘and so on’ and argues as follows. Going through the melting of the ice and its conditions in detail brings out that at each step we have to say that this event could not have happened without its cause. There must have been a cause. Yet, at each step we were relegated to yet another cause. The necessity involved in the statement “there must have been a cause” was thus not fully accounted for by stating the cause of the event at hand. Rather, another cause was needed. And then, yet another cause was needed; and yet another cause, etc. The principle that every event must have a cause—which Kant, in the Second Analogy, argues to be a law of nature—is thus

²⁶ Reflexion 4784, XXVII:727. My translation. The original is as follows: “Wenn etwas geschieht, so muß es eine Ursache haben. Allein die causalitaet der Ursache ist auch etwas, was geschieht; sie muß also wiederum eine Ursache haben, und so ins unendliche.“

²⁷ While a confluence of particular events can constitute a cause, it is important to have in view the difference between a particular cause and general circumstances.

taken to stand in need of “completion” of the chain of causes, so as to account for the necessity entailed by it.

Kant puts the argument of the thesis position as follows:

If [...] everything happens according to mere laws of nature, then at every time there is only a subordinate but never a first beginning, and thus no completeness of the series on the side of the causes descending one from another. But now the law of nature consists just in this, that nothing happens without a cause sufficiently determined a priori. Thus the proposition that all causality is possible only in accordance with laws of nature, when taken in its unlimited universality, contradicts itself, and therefore this causality cannot be assumed to be the only one.²⁸

This argument can also be put in the following way. When we state a cause of an event, then we state a reason for that event.²⁹ Yet, the considerations above show that we never succeed to state a sufficient reason for why the event occurred. The only thing we stated was a chain of causes where at each step the burden of providing a sufficient reason for the original event got kicked down the road to the next step. Thus, in order to provide a sufficient reason for why an event—any event—occurs, a different kind of causality must be assumed, a kind of causality that does not kick the burden of providing a sufficient reason down the road to the next cause. This different kind of causality is a causality of freedom, the thesis position argues.

Against this argument of the thesis position, the *antithesis* position argues that there cannot be a different kind of causality. For, a different kind of causality would not make contact with natural causality, i.e. causality according to laws of nature. Such a different kind of causality, transcendental

²⁸ B472-4/A444-6.

²⁹ For a helpful account of the relation between the principle of sufficient reason and the principle of causality in Kant, cf. Longuenesse 2001.

freedom, would occur and do its causing without a previous cause and is supposed to determine an event, such as an action, without itself being determined by a previous cause. In light of this being the character of transcendental freedom, the antithesis position argues:

a [...] first beginning of action [according to transcendental freedom] presupposes a state that has no causal connection at all with the previous one, i.e., in no way follows from it. Thus transcendental freedom is contrary to the causal law, and is a combination between the successive states of effective causes in accordance with which no unity of experience is possible, which thus cannot be encountered in any experience, and hence is an empty thought-entity.³⁰

The antithesis position argues that were there transcendental freedom, then there would be no connection whatsoever between the first beginning of a free action and the natural cause of the state of the agent previous to this first beginning. Given that causes can be taken to be a kind of reason, we can ask: What reason could be stated for why the action began? The answer is: None. It could only be said that transcendental freedom is such that there is no reason for why it occurs. Thus, the unity of nature would be abolished, as events would then occur without a reason, i.e., cause. Furthermore, we have seen in the first chapter that Kant argues that the absence of a cause means that we cannot consider the event at hand to be objective, i.e. to actually occur. A causality of freedom would not account for why an event occurs at the time it does and, hence, we would have no means to distinguish a free action from a mere figment of our mind. The claim to a causality of freedom of the thesis position thus falls to the ground, the antithesis position argues.

In light of this argument of the antithesis position, the situation seems to be the following. Transcendental freedom abolishes nature and objectivity. Hence, every event—and thus every human

³⁰ B473-5/A445-7. Translation amended.

action—is only possible due to the chain of previous causes having occurred. Given that the event at hand is determined by the chain of previous causes, and given that this chain of causes has already occurred, each and every event had to happen in the way it did. That is, it seems that every event is pre-determined to occur in the way it did and does. As discussed above, Kant calls this view “**predeterminism**”.

However, as the thesis has argued, ‘the law of nature consists just in this, that nothing happens without a cause sufficiently determined a priori’. That is, for an event to occur, its conditions must be in place. Thus, for every event there must be a complete and real chain of causes.—And this claim is also part of the antithesis position. Thus, in order to make sense of the antithesis position, we must give an account of how there can be a complete chain of causes for every event. But this is only possible, the thesis position argues, by introducing a different kind of causality than natural causality.

Thus, thesis and antithesis refute each other. Furthermore, they do so in such a way, Kant holds, that we cannot find our way out of initially endorsing the one, then acknowledging the force of the argument of the other, hence endorsing the other, but then acknowledging the force of the argument of the first again, and so on, until eternity. That is, we will waver back and forth between the argument that freedom would abolish the unity of nature and the argument that we can only make sense of the concept of nature by introducing a different kind of causality than natural causality. Both the thesis and the antithesis position seek to make sense of the concept of nature. Yet, their mutually controverting each other’s position amounts to nature’s inherent contradictoriness. And this amounts to the abolition of the concept of nature.

Kant judges that this uneasy—if not untenable—situation is an expression of the ‘natural and unavoidable illusion’ mentioned above, i.e., of Transcendental Realism.³¹ *Thus, Transcendental Realism*

³¹ B518-35/A490-507.

abolishes nature. Furthermore, Transcendental Realism equally abolishes *freedom*, because of the antinomy into which we fall when trying to make sense of freedom as relating to human actions.

Kant holds that while it is natural and even unavoidable that we fall into this antinomy when we reflect on causality, nature, and freedom, this antinomy can be overcome. It can be overcome by identifying an underlying premise of both thesis and antithesis, a premise that seems to be obligatory but actually is not. This underlying premise is: Transcendental Realism. But in what way is Transcendental Realism underlying the antinomy about causation?

Transcendental Realism is present in the antinomy, I submit, through the assumption that nature is *a perfectly unified, self-standing whole that is, as such, real*. Put differently, the assumption is that nature is *fully determinate* and that this determinacy can be understood *without reference to our capacity for cognition*, i.e., without addressing the question how finite cognizers can make determinate judgments about objects in nature and nature as a whole. This assumption is present in the *thesis position* in the contention that we must think of every event as having a sufficiently determining chain of causes to which we must ascribe reality. In the *antithesis position* this assumption is present in the view that every event is sufficiently determined by *natural* causation and thus had to happen in the way it did. The view that every event is sufficiently determined through natural causation underlies predeterminism. For, according to *predeterminism*, all events, including human actions, are predetermined to occur in the way they do. Given that human actions are occurrences in the world, this amounts to the view that human actions are *sufficiently determined* through natural causation to occur in the way they do. This is so because if an event is causally only *insufficiently* determined through natural causation, then this event is *not* causally *predetermined* to occur in a certain way. Now, predeterminism is an expression of Transcendental Realism, because an event is only sufficiently determined through natural causation, if the causal chain running up to the event in question were, as such, real. If that were so, then all conditions of an event would be real or “given”. Then, nature would be a perfectly unified, self-

standing whole. (Thus, what underlies the antithesis is ‘naturalism, which would have it that nature is sufficient unto itself.’³²) Against this expression of Transcendental Realism, Kant holds:

The entire antinomy of pure reason rests on this [specious] argument: If the conditioned is given, then the whole series of all conditions for it is also given; now objects of the senses are given as conditioned; consequently, etc.³³

In the title of the sixth section of the chapter ‘The Antinomy of Pure Reason’ in the *Critique of Pure Reason* Kant tells us how Transcendental Realism and the just stated specious argument can be overcome. The title reads: ‘Transcendental idealism as the key to solving the cosmological [antinomy]’.³⁴ Transcendental Idealism, to state it again, is the doctrine that the objects of our knowledge are spatio-temporal objects, i.e. appearances.³⁵ This is to say that, according to Kant, the antinomy arises because we are naturally prone to neglect that it is *spatio-temporal* objects that we have knowledge of and are hence unaware of the implications of this point. These implications include that in order for knowledge of spatio-temporal objects to be possible, the mind must have a certain structure or form. Kant’s argument is that once we take into account that the objects of our knowledge are spatio-temporal objects, then we see that ‘the whole series of all conditions’—in the case of events, this is the chain of all causes—is not actually given to us, but is rather ‘set as a task’.³⁶ The crucial point in Kant’s argumentation is the following: Given that the objects to which we can ascribe reality are essentially in space and time and given that space and time have no end, we cannot ascribe reality to a ‘whole series of all conditions’. Yet, our thinking that there must be a whole series of all conditions and that nature is a perfectly unified, self-standing whole is not completely wrong either. But what this

³² *Prolegomena*, 152/IV:363.

³³ B525/A497.

³⁴ B518/A490.

³⁵ B518-20/A490-2.

³⁶ B526/A498.

concept of a complete nature *actually* does, Kant holds, is that it *guides us* in our experience.³⁷ As such, this concept does not have objective reality in the way in which empirical concepts have objective reality, concepts which have a corresponding intuition, where, e.g., we can point to instances in order to demonstrate their objective reality. That is, our conception of nature as a perfectly unified, self-standing whole is not something to which we can ascribe such reality. Rather, nature is the formal unity of all appearances. Nevertheless, also the conception of nature as a perfectly unified, self-standing whole plays a role in our mind: it figures as an unreachable goal that orients us in our never-ending effort to increase and unify our experience.

But how does a feasible account of causation and nature look like, then? Kant's positive account of events as constituents of nature is, I submit, as follows. Events (and appearances more generally) are essentially conditioned; yet, this conditioning relation is not such that the event can only have occurred if the totality of conditions, i.e. causes, is given and thus predetermines the event. The mistake of Transcendental Realism is to think that the chain of causes is given, is real, even though no being that has knowledge of spatio-temporal objects could ever have knowledge of an infinite chain of causes. No person could justifiably claim that there really is such an infinite chain for every event. Events are thus *not* grounded in their causes in such a way that they can only occur if the whole chain of causes is given. Rather, we can justifiably claim to have knowledge about events that we experience³⁸ without our having knowledge of the chain of causes that lead to this event. Such knowledge claims are made through experience and we do indeed make valid claims of experiential knowledge. Kant argues that a claim to knowledge of an event is only possible if that event has *some* cause. This is the way in which Kant is a **determinist**: he holds that every event has a cause. But it is not predetermined

³⁷ Cf. B536-8/A508-10; B671-3/A643-5; B712-3/A684-5.

³⁸ We only do have knowledge, of course, if we make no mistake in our judgement. For a more thorough defense of this position, cf. Kern 2017.

that it had to be the specific cause that the event happened to have. *Kant is a determinist without being a pre-determinist*, I hold. Nevertheless, the thought of a totality of causes orients us in making causal claims. One could say that events are conditioned by their causes only *locally*, not globally.

Put in hylomorphic vocabulary, “cause” is a formal concept; and equally is “nature”, in the sense of there being an *indefinite* chain of causes for whatever event we pick out. Qua formal, these concepts stand in need of sensibly given matter. Hence, we can only make claims about the existence of causes when a corresponding intuition is at least in principle possible. This is not the case for the concept of nature. This concept is rather to be understood in such a way that objects of experience hang together and that this unity can be ever more extended and refined. Yet, the concept of nature only sets the task of finding ever more particular causes for particular events. This concept is thus an “idea”, in Kant’s technical sense of the term, according to which ideas formulate an imaginary endpoint of experience and natural science.³⁹ We misunderstand the form of that concept if we think that it is already enmattered and that hence an infinite chain of causes is given.

Once we have freed ourselves from Transcendental Realism, we are free to hold that every event must have a cause without thereby freedom being ruled out. Freedom would only be ruled out if pre-determinism were true. But pre-determinism rests on Transcendental Realism, which leads to the Antinomy of Reason. And the Antinomy of Reason is only resolved by abandoning Transcendental Realism and by adopting Transcendental Idealism, i.e. by acknowledging the spatio-temporality of our objects of knowledge and the implications of this point. It is thus *not excluded* that human beings act and think freely, that they have a will and understanding. Hence Kant can speak of human beings as natural causes for which it is *not excluded* that they may also be causes in a different way.⁴⁰

³⁹ Cf. B670-92/A642-64.

⁴⁰ Cf. B573/A545.

However, Kant equally rejects the argument of the thesis position that we *must* introduce a causality of freedom in order to make sense of nature. Kant's argument—and he is explicit about this—only establishes that *freedom is not ruled out*. His argument is merely negative. A consequence of this is that by theoretical means there can be no account of *how* freedom can be real, i.e., of the way in which freedom can be manifest in nature.⁴¹ Nevertheless, Kant has established that nature is not a self-standing, fully determinate whole in itself. Natural causation cannot fulfil the demand of the principle of sufficient reason. Rather, one could say, nature is “open ended”. At the end of the Antinomy chapter, Kant summarizes his central point thus:

As long as we, with our concepts of reason, have as our object merely the totality of the conditions in the world of sense, and what service reason can perform in respect of them, our ideas are transcendental but still **cosmological**. But as soon as we posit the unconditioned (which is what is really at issue) in that which lies outside the sensible world, and hence in that which is outside all possible experience, then the ideas come to be **transcendent**; they do not serve merely to complete the empirical use of reason (which always remains an idea, never to be completely carried out, but nevertheless to be followed), rather they separate themselves entirely from it and make themselves into objects whose matter is not drawn from experience, and whose objective reality rests not on the completion of the empirical series but on pure concepts *a priori*.⁴²

Yet, as history has shown again and again, Kant's position is not easy to understand. The next section is thus devoted to readings that, I think, misunderstand Kant's resolution of the Third

⁴¹ Cf. B585-6/A557-8.

⁴² B593/A565.

Antinomy and thus Kant's solution to the problem of free will. The contrast to these readings then allows for getting better into view what, I argue, is Kant's actual position.

III. Received Views

The difficulty of spotting the Transcendental Realism in one's thinking is the topic of this section. I hence discuss an array of received views in order to bring out how these views are—certainly contrary to the authors' intentions—informed by Transcendental Realism and hence fail to take Kant's hylomorphism, i.e., Transcendental Idealism, into account.

According to a popular reading of Kant's philosophy, Kant solves the problem of free will in a “compatibilist” fashion. According to this view, natural causality and freedom are compatible because freedom does not pertain to nature but only to the “transcendental” or “noumenal realm”. In this way, determinism—predeterminism, indeed—and freedom are taken to be compatible with each other. That is, predeterminism is embraced for events including human actions, but freedom is taken not to be ruled out because we can determine our will freely in a separate noumenal realm. An early proponent of that view was Arthur Schopenhauer,⁴³ but also very recent interpretations defend it, such as Nick Stang's in his *Kant's Modal Metaphysics* from 2016 or Ian Proops' in his 2021 book *The Fiery Test of Critique*. I first discuss these two interpretations before moving to discuss interpretations that are closer to mine, Henry Allison's and Lucy Allais'.

As part of his project to give an account of modalities in Kant, Nick Stang conceives of “empirical-causal possibility” in such a way that “[t]he history of the empirical world up to a moment, plus the natural laws, determine a unique future history.”⁴⁴ He defines:

⁴³ Cf. Schopenhauer 1839.

⁴⁴ Stang 2016: 215.

(*Empirical-causal possibility*) It is *empirically-causally possible* that p if and only if it is compatible with actual natural laws, and the past history of the empirical world up until time t , that p .⁴⁵

Furthermore, according to Stang, if natural laws and the history of the empirical world determine a unique future history, then “empirical-causal possibility” is at the same time “empirical-causal necessity”. Stang writes: “That natural laws are deterministic entails that every empirical event is empirically-causally necessary (empirically necessary, for short). ... Consequently, the actual, the empirically possible, and the empirically necessary are co-extensive.”⁴⁶ While Stang thereby abolishes the modalities for the realm of appearances, what is of primary interest for the topic of this chapter is that Stang reads Kant in such a way that an event is indeed fully determined by the causal chain that lead up to it. The fact that the concept of a complete causal chain can in principle not have a corresponding intuition does not have a bearing on Stang’s taking an event to be fully determined by its causal history. That is, Kant’s doctrine that the determinacy of empirical cognition has to come from the senses does for Stang *not* have a bearing on whether events—including future events—are determined by the past.

Yet, Stang shows some awareness of the Antinomies’ critical potential for the issue of predeterminism. He thus writes:

However, there is a problem with this [Stang’s] definition of empirical-causal possibility. ... “the past history of the empirical world up until time t ” does not refer to any possible object of experience. ... it refers to nothing: there is no such thing, according to Kant, as the complete past before a given time.

⁴⁵ Ibid.

⁴⁶ Stang 2016: 216.

Fortunately, this problem can be resolved. Kant's deterministic conception of natural laws entails, not that the natural laws plus the *past history of the empirical world up until time t* determine a unique future, but that the natural laws plus *the past history of the empirical world for an arbitrary interval of non-zero duration before time t* determines a unique future. ... if we fix a non-zero interval of the empirical series before *t*, given the natural laws, only one future is possible.⁴⁷

Stang recognizes Kant's point that the concept "the past history of the empirical world up until time *t*" can in principle not have a corresponding intuition. What this concept denotes is not a possible object of experience. The solution to this "problem" consists in our "fixing a non-zero interval of the empirical series". Once this is done, Stang's predeterminism seems to be up and running again. Unfortunately, this solution does not work. For what would it mean to "fix a non-zero interval of the empirical series"? True, the problem is solved that we cannot have an intuition of a temporally infinite causal history. But Stang's solution must involve our being able to "fix" a non-zero interval of all of the empirical world. Yet, we can as little have an intuition of the *spatially* infinite *empirical* world as of its temporal infinity.⁴⁸ That is, there is no such thing as "fixing a non-zero interval of the empirical series" in such a way that we would then be justified in taking subsequent events to be fully determined by their causal history. We can form concepts such as "a non-zero interval of the empirical series" or "the state of the universe at time t_1 ", but the lesson of Transcendental Idealism is that such concepts can *only guide* us in our experience and do *not* have the *objective reality* of materially saturated concepts such as "sunshine" or "photon".

⁴⁷ Stang 2016: 217-8.

⁴⁸ That the empirical world is at issue means that material intuitions are needed, and not merely formal intuitions, as they are the subject matter of mathematics.

It is for these reasons that Stang's interpretation fails. Stang's account can, however, serve as a helpful illustration for what it means to think along transcendently realistic lines. It can do that especially well because Stang is very clear-minded regarding the consequences of his account, such as the abolition of the modalities with respect to appearances. While Stang is very clear in his endorsement of predeterminism, another recent interpretation brings out what it means to hold on to freedom while thinking along the lines of Transcendental Realism.

A very recent example of a contemporary Kant scholar who reads Kant as endorsing predeterminism is the account stated by Ian Proops in his 2021 book *The Fiery Test of Critique*. Regarding the topic of the necessitation of events, he writes:

[T]here is reason to think that [Kant] believes that all human actions are indeed determined in the sense of being necessitated given the past and the laws (that is to say, 'metaphysically determined').

Evidence for the stronger conclusion that he takes all *events* to be metaphysically determined is provided by ... Kant[']s view] that event-causal determinism is a consequence of the principle of the second analogy—a principle he takes himself to have established in the *Transcendental Analytic*.⁴⁹

In this quote, Proops makes clear that he takes predeterminism to follow from the Second Analogy of Experience. Proops' account differs from ordinary compatibilist views insofar as he is not willing to give up on the point that freedom must be related to human agency. That is, he holds on to the point that an utterly inefficacious freedom would be no freedom at all. A freedom separated from reality would be no freedom, one could say. However, equally not willing or able to give up on what

⁴⁹ Proops 2021: 288-9.

is commonly called “determinism”—and what I suggest is better labelled “predeterminism”—Proops draws the following conclusion.

If I am right that Kant is a determinist, he must be conceiving of the agent’s timeless causing of a phenomenal action as amounting to the timeless production of the whole series of causally linked events leading up to, and flowing from, that action. Given determinism, we can think of this ‘noumenal choice’—as it tends to be called in the literature—as the choice either of a fully specified state of the universe at a given time, or of the natural laws (given some such state), or of both.⁵⁰

If Proops’ usage of “choice” is here still connected to human agency, as I think it must, then he draws the astonishing conclusion that freedom and predeterminism are compatible because we are—unbeknownst to us—capable of choosing either “a fully specified state of the universe at a given time” or the natural laws or both.⁵¹ Proops thus brings out starkly in what precarious a position we end up when we do not inquire into predeterminism in the way that Kant urges us to do—if Kant is read in a hylomorphic way, that is.

Thus, Stang and Proops read Kant as endorsing predeterminism. As I argued in the previous section, predeterminism is an expression of Transcendental Realism. I would like to now repeat and add to this argument. Once we take into account that the objects of theoretical, empirical knowledge are appearances and that our mind must hence have a certain form, we can come to see that formal concepts such as “cause”, “nature”, and “causal chain” only have objective reality insofar as they

⁵⁰ Proops 2021: 300.

⁵¹ That this is indeed Proops’ view is clear from his discussion, at Proops 2021: 305-9, of the problem that we now seem to be responsible for all states of the universe that are connected to our choosing our empirical character, including atrocities committed by other people before our birth. Proops claims to solve that problem by holding that a person is not responsible for such states, because it is “hardly likely” that someone accepts the—in Proops’ eyes—Kantian position that they could choose a different past. (Cf. Proops 2021: 306.)

pertain to our capacity for knowledge. We can only claim that a particular event was *in fact* caused by a *particular* cause when a corresponding intuition can be given for such a cause. Only in this way can we make a *determinate* claim about an event. Concepts such as “the causal chain necessitating an event” or “the causal history of the universe” are simply too abstract, *too indeterminate*, in order to justify a determinate claim about the particular cause of a particular event such as a human action. To be sure, we can only conceive of an event as objective by conceiving of it as having a cause. (This is Kant’s *determinism*.) Yet, this formal determination of experience has to be saturated with sensible matter when we want to state a cause. By means of transcendental philosophy we know—or are fortified in our knowledge—that every event must have a cause. But in order to make that formal claim concrete, i.e., in order to make determinate claims, we have to bring in sensible matter. Stang’s and Proops’ transcendentially realistic manner of thinking thus flouts Kant’s hylomorphism, insofar as they consider merely formal claims as being enmattered and having the objective reality of full-blown experiential cognition. This general point can be spelled out in the following way.

The mistake of predeterminists such as Stang and Proops is, I submit, that they misunderstand the concept of *objectivity*. It is true, according to Kant, that we have to conceive of an objective event *as if* it were sufficiently determined through natural causation. This concept of a sufficient determination gives rise to the idea of an infinite chain of causes. That is, in order to conceive of an event as objective, we have to conceive of it *as if* it were brought about by an infinite chain of causes. Yet, claims to objectivity are primarily claims to something’s being the case, i.e., to something’s being actual. The idea of sufficient causal determination, of an infinite causal chain, is *merely an idea*—in Kant’s technical sense of the term. As a mere idea, the idea of sufficient causal determination is not claimed to be actual and only has objective reality insofar as we do make claims about actual events. For Kant, actual events are the locus of objectivity, and the idea of sufficient causal determination rides piggy-back, as it were, on claims we make about actual events. The centrality of *actuality* to Kant’s

conception of objectivity stands opposed to predeterminism. For, according to predeterminism, future events are already *sufficiently determined* to occur in a certain way. Yet, according to Kant, a claim to sufficient determinacy is only possible about an event that is *actual*. And future events are by dint of their futurity not actual. Furthermore, when the idea of sufficient determination is employed as part of a claim about an actual event, then the sufficient determination is not actual, but merely an idea. Thus, predeterminism rests on a misunderstanding of the concept of objectivity, insofar the predeterminist takes a mere idea to be actual.

My way of construing Kant's criticism of predeterminism can also be put in the following way. The **predeterminist's claim** is: future events are already sufficiently determined to occur *in a certain way*. Yet, to say "in a certain way" here amounts to a very *indeterminate* statement. In what way? The predeterminist could not say. For, nobody can make justified, determinate claims about future events in such a way in which justified, determinate claims are possible about actual events. This lack of determinacy of the predeterminist's claim goes hand in hand with a lack of *objective reality* of said claim. (Recall that *reality* just means "whatness" or "determinacy". Objective reality is thus "whatness" or "determinacy" with objective purport.) Given that the predeterminist's claim lacks the objective reality needed for claims to actuality, the claim cannot be taken to state something that is actually the case. The claim can only be taken to state a *justified expectation*. The predeterminist's claim would hence be better put in the following way: once future events are actual, then their determinacy—that they occurred in this rather than that way—can only be made sense of by taking them to be sufficiently determined through natural causation. Understood in this way, as a justified expectation, however, the predeterminist's claim cannot lay claim to predetermination anymore. In order to pose the threat to human freedom that predeterminism is originally taken to have, the predeterminist's claim would have to have the objective reality and thus determinacy of a claim to actuality. Yet, the predeterminist's claim does not have such a determinacy and cannot have it about future events. For, nobody can

sufficiently specify in what way future events will occur. Yet, the objective reality of claims about specific events would be needed in order to get the predeterminist's claim off the ground.

Predeterministic-compatibilistic views as espoused by Stang and Proops are not without alternatives, however, also in the current scholarly debate. In his book *Kant's Conception of Freedom* from 2020, Henry Allison argues in a similar fashion as I do, by distinguishing between determinism and predeterminism. Allison holds that *once events*, including actions, *have happened*, they must have a cause from which they followed with necessity, which also holds for that cause, and for the cause of that cause, and so on. Judgments involving such necessity—necessity regarding *particular* causes, I would add—are, however, *essentially retrospective*. Regarding human agents, Kant ...

... claims that, despite their thoroughly determined past when considered retrospectively, when viewed prospectively such agents have a genuinely open future. ... The key to this seemingly paradoxical position is the distinction, which Kant also drew in his later writings, between being *determined* and being *predetermined*, with the former being affirmed and the latter denied as incompatible with free agency and imputation.⁵²

I hope that the discussion in this chapter so far already helps to ameliorate the air of paradox regarding this position. The fact that the objects of our contentful, theoretical knowledge are spatio-temporal objects, i.e., appearances, brings with it that the necessity of particular future events can only be stated in a very limited because indeterminate fashion.

Allison also makes the following interesting point. Drawing on work by Heinz Heimsoeth,⁵³ Allison points to a set of reflexions (R 5611-20) which is, I think, very helpful in order to understand how exactly transcendental freedom can determine human actions. While Kant's argument regarding

⁵² Allison 2020: 212-3.

⁵³ Heimsoeth 1967.

free will in the *first Critique* is *merely negative*—he only argues that free will is not excluded—this merely negative argument may be better understood when some sense is conveyed of the *positive account* of free will that is possible once predeterminism is overcome. Transcendental freedom can determine human actions by determining the *empirical character* of human beings. This is the character that a human being is attributed to in statements such as “She’s a high-energy character”, “He has a melancholic character”, “She has an unformed character”, &c. The following quote from said set of reflections regarding character formation through *habit* conveys the central point of how Kant thinks freedom can be real.

Reason gradually draws sensibility into *habitus*, arouses incentives, and hence forms a character, which however is itself to be attributed to freedom and is not sufficiently grounded in the appearances⁵⁴

Kant says that we gradually form our own character and that we do so by means of developing habits. The emphasis on the character of a person is helpful, I think, because it *shifts the focus* away from individual actions and towards the character from which these actions flow. In the first instance, the character is the cause of somebody’s actions. Now, we can engage in reflection about what character would be good to have, and such reflection is not per se determined by natural causes.⁵⁵ Furthermore, such reflection can become efficacious insofar as we can *form our character*—by influencing our habits.⁵⁶ In this way can transcendental freedom be efficacious and thus, as Kant says, “**the empirical character [be an] appearance of the intelligible character.**”⁵⁷ (Note how, on this picture, freedom

⁵⁴ XVIII:252.

⁵⁵ One way to argue for this point is the following. Reflection occurs in thinking, and thinking has a different form than what can be causally necessitated. Thinking is inferentially and holistically structured, which does not hold for typical cases of causally necessitated natural events, such as the warming of a stone.

⁵⁶ Reason informs our habits in two ways, I would think. Either it does so “automatically” or through a conscious effort on our part to change our habits. Only a holy will does not stand in need of the latter, it seems to me.

⁵⁷ B569/A541; my boldface.

regarding individual decisions is de-emphasized, whereas the locus of freedom is rather seen in a person's character. The concept of a character has a *different temporality* than the concept of an individual action or decision, insofar as a character persists through time. A character is "time-general",⁵⁸ akin to dispositions.)

This understanding of how we can influence our character and the contrast to Stang's and Proops' predeterministic readings allows for getting into view what I take to be Kant's actual position, his actual compatibilism. *This* compatibilism does not consist in rendering the freedom of the human will inefficacious, but in pointing out that predeterminism rests on a misunderstanding. Once this misunderstanding is exposed and understood, we see that freedom is not actually ruled out by the determinism that is entailed in the principle of causality as argued for in the Second Analogy. Conceiving of Kant's position in this way allows us to understand how Kant can write things as the following.

We need the principle of the causality of appearances in order to be able to seek for and specify the natural conditions, i.e., causes in appearance, for natural occurrences. If this is conceded, and not weakened by any exceptions, then the understanding, which in its empirical use sees nothing but nature in all events and is justified in doing so, has everything it could demand, and physical explanations proceed on their own course unhindered. Now this is not in the least impaired [...] if one assumes that among natural causes there are also some that have a faculty that is only intelligible, in that its determination to action never rests on empirical conditions but on mere grounds of the

⁵⁸ Cf. Rödl 2012, ch.6.

understanding, as long as the **action in the appearance** of this cause accords with all the laws of empirical causality.⁵⁹

When we reflect what character it would be good to have, then this reflection—if successful—is not determined by natural causation and thus “never rests on empirical conditions”.⁶⁰

Having addressed my agreement with Allison as well as his helpfully pointing to Kant’s account of character formation through habit, I now want to turn to two central problems that I see in his account. First, in a text from 2006, Allison speaks of Transcendental Idealism being “*therapeutic*”: It disabuses us of “the assumption that there must be some noumenal fact of the matter regarding freedom.”⁶¹ Insofar as Kant seeks to cure us from the natural and unavoidable illusion that makes us misunderstand the hylomorphic character of knowledge, I am completely sympathetic to this thought. However, especially in earlier writings, Allison has not carried out that therapy with respect to his own thinking fully and still holds a conception of the “thing in itself” which flouts Kant’s conception of form, it seems to me. According to this conception, things in themselves are what is “really real”, whereas appearances are somehow defective in being objects of theoretical knowledge. In a text from 1976, Allison writes about certain pre-Critical philosophies, which “affirm the possibility of a priori knowledge, but which fail to recognize that these are merely subjective conditions of human experience. Instead, they view them as conditions of reality itself.”⁶² Allison here characterizes “certain pre-Critical philosophies” as holding that certain “subjective conditions of human experience” are “conditions of reality itself”. That is, according to Allison, these pre-Critical philosophies fail to recognize the *mere subjectivity* of the conditions of human experience and award these conditions a relation to “reality itself” they cannot have. While Kant can plausibly be read as holding that practical

⁵⁹ B572-3/A544-5.

⁶⁰ Cf. Pippin 1987; Boyle 2009.

⁶¹ Allison 2006: 18.

⁶² Allison 1976: 234.

knowledge in some sense overcomes a shortcoming of theoretical knowledge regarding objective reality, Allison's claim here seems to be different. It seems to be an expression of some covert skepticism, according to which the subjective conditions of human experience do not allow us to get at reality itself. Yet, such a conception of "reality itself" seems to flout Kant's Critical insight that reality, i.e., determinacy, has to be given through the senses. For the Critical Kant, whatever claims to reality can be made (in theoretical cognition), these claims must be based on experience or the conditions thereof. And while in the second edition of Allison's *Kant's Transcendental Idealism* from 2004 this "subjectivist-skeptical" strand present in Allison's earlier thinking is largely eliminated, it occasionally still flickers up also in his later writings.⁶³

The second, and maybe even more important, central problem that I see in Allison's writings consists in his not saying enough to actually bring said therapy about.⁶⁴ That is, Allison does not say enough in order to help the predeterminist recognize what she is doing when she thinks that the future is already determined: that she therein actually thinks along transcendently realistic lines, one manifestation of which is that she treats ideas as if they had the objective reality of determinate concepts. Allison's talking of there being no "noumenal fact of the matter regarding freedom" is by itself not helpful, because it is not clear what this means. And Allison, I think, does not bring out well enough what that is supposed to mean.

So maybe it is not surprising that other established scholars did not understand Allison's point of distinguishing determinism and predeterminism and seek to read the distinction along transcendently realistic lines. This, I think, is exactly what happened in a review of Allison's *Kant's Conception of Freedom* written by Yoon Choi and Colin McLear. Regarding that distinction they write:

⁶³ Cf. Allison 2004: 24-5, Allison 2020: 254.

⁶⁴ I think this holds for Allison 2004, Allison 2006, as well as Allison 2020.

Though Allison does not make this totally clear, *Predeterminism* is the claim that, for every act A that occurs there is a (temporally) prior event E such that the occurrence of E, along with the laws of nature, *necessitates* A. In contrast, *Determinism* is the claim that for every act A there is a *ground* through which that act is *necessitated*. Predeterminism is a species of determinism, but it is not identical with it. So in the above passage, Allison points out that, in rejecting compatibilism, Kant denies that the free will is ‘predetermined’, that is, determined by a temporally antecedent ground. He does not, however, claim that the free will is not determined, in the sense that free acts of choice are not necessitated.⁶⁵

For Choi and McLear, predeterminism is the claim that an event must have a cause that is equally in nature and thus acts by means of laws of nature. In their contrasting characterization of determinism they abstract away from the concept of a cause and only talk of the more indeterminate concept of a ground, a ground that nevertheless *necessitates* what it grounds. (It may be worth noting that this understanding of determinism is in line with Eric Watkins’ account of the Second Analogy discussed in the previous chapter.) Thus, Choi and McLear read Allison as (reading Kant as) endorsing that human actions are necessitated, but as denying that they are temporally necessitated. In opposition to such readings I have argued that the Second Analogy establishes what Choi and McLear call “predeterminism” and what I simply want to call “determinism”, namely, the principle that every event follows with necessity from a (temporally prior)⁶⁶ cause. I have furthermore argued that a proper hylomorphic, i.e., transcendently idealistic, understanding of the Second Analogy does *not* imply predeterminism in my sense, i.e., that the future is fixed and that events could not have happened but

⁶⁵ Choi & McLear 2022: 163; my italics.

⁶⁶ Note that the cause need not be clearly prior in time to the effect. As Kant remarks at B247-9/A201-4, cause and effect can also be all but simultaneous.

in the way they did. Choi and McLear do not see the distinction between determinism and predeterminism in my sense and hence misunderstand Allison's invocation of the distinction between determinism and predeterminism. Consequently, in what follows the quoted passage, Choi and McLear criticize Allison on the basis of their understanding of the distinction between determinism and predeterminism.⁶⁷ If I am right that Allison's position should be understood along the lines presented in this chapter, then Choi and McLear's criticism is based on a misunderstanding of the distinction between determinism and predeterminism. Presumably, they think that (what I call) determinism cannot be separated from (what I call) predeterminism—which is exactly what the transcendental realist does. Hence, they collapse that distinction, and only put (what they call) predeterminism in its place. They conclude that Kant rejects predeterminism in order to show that freedom is not excluded. This chapter and this dissertation as a whole is an attempt at saying more about Transcendental Realism in such a way that it becomes more understandable what Transcendental Realism is, what it means to overcome it, and what it means to adopt Transcendental Idealism, i.e., a properly hylomorphic reading of Kant. My hope is that such misunderstandings as those by Choi and McLear can thereby be avoided.

Before closing I want to discuss a further scholar who—though in a cautious and tentative fashion—suggested to read Kant as defending determinism while rejecting predeterminism, in the senses of the terms I have argued for. This scholar is Lucy Allais, who voiced that suggestion in a conference proceeding from 2018 entitled “The Compatibility of Kantian Determinism with an Open

⁶⁷ Their criticism is based on an understanding of time that does not take the formality of time properly into account. Robert Pippin's account of the formality of space in Pippin 1982 ch. 3 is helpful with respect to the question what it means to properly take the formality of time into account. About the intricate intertwining of sensibility and understanding with respect to space and time, cf. Conant 2016.

Future”. The title already suggests a close proximity to my reading.⁶⁸ And indeed Allais writes in that text:

I argue that central features of Kant’s transcendental idealism enable us to separate the idea that every event in space and time has a cause that falls under a necessitating law from the claim that there is only one possible future. I suggest that running these ideas together is a symptom of precisely the kind of transcendent metaphysical mistake that Kant is concerned to diagnose in the *Dialectic*.⁶⁹

I am in full agreement with that statement of Allais’. However, similar to Allison, I think that Allais misses the full extent of the “transcendent metaphysical mistake that Kant is concerned to diagnose in the *Dialectic*.” For, also Allais endorses what one could call a “subjectivist-skeptical” reading of the “thing in itself”. She writes:

Science is, in principle, incomplete; it does not cognize the intrinsic natures of things. It gives us knowledge only of relational features of reality and leaves us ignorant of the intrinsic natures in virtue of which things have the powers they do.⁷⁰

As I understand his transcendental idealism, [Kant] holds that the world in space and time – what science cognizes – is not the most ontologically fundamental level of reality. And the nature of spatio-temporal appearances is partly a function of the way things are in themselves.⁷¹

⁶⁸ In case this is worth mentioning, I had only read this text of Allais’—as well as Allison 2020—fairly recently, and only after I had developed my position.

⁶⁹ Allais 2018: 716.

⁷⁰ Allais 2018: 718.

⁷¹ Allais 2018: 720-1.

According to Allais, in order to properly understand spatio-temporal appearances, we need to understand things as they are in themselves, which is something that we cannot do. (Such a reading is reminiscent of Locke’s claim that we can only know the nominal and not the real essences of things.⁷²) It is, however, unclear why it should be the case that “the nature of spatio-temporal appearances” is “a function of the way things are in themselves”. What systematic reasons speak in favor of that claim? Furthermore, if things in themselves are radically unlike appearances, how can the nature of the latter be a function of the former? Finally, it is unclear how *that specific* a claim—that the nature of appearances is a function of things in themselves—can be established regarding things in themselves if things in themselves cannot be known. This is the classical problem with respect to “noumenal ignorance”.

In anticipation of a rejoinder by Allais, I want to emphasize that I do not deny that Kant makes claims such as the following.

If, on the other hand, appearances do not count for any more than they are in fact, namely, not for things in themselves but only for mere representations connected in accordance with empirical laws, then they themselves must have grounds that are not appearances.⁷³

This passage seems to speak in favor of Allais’ claim regarding appearances. Yet, it is not clear that the grounds in question are to be understood as something like ‘the things that the appearances really are’, as if there were a world behind the world where the true appearances live, whereas we have access only to the second-class appearances. (Such a reading turns Kant into a “Hinterweltler”, as Nietzsche puns on “Hinterwäldler”, the German word for “hillbilly”.⁷⁴) Rather, this quote can be read in a way

⁷² *Essay*, III.iii.15.

⁷³ B565/A537.

⁷⁴ Cf., e.g., *Human, All too Human* II: §17; *Thus Spoke Zarathustra* I: ch. 3, III: ch. 12 – §14 & §15.

that I sketched in the previous chapter: the grounds in question can be taken to be grounds in transcendental cognition. That is, we can understand appearances to be grounded in a thing in itself insofar as a “thing in itself” is the object of purely rational cognition,⁷⁵ and where we take this purely rational cognition to be transcendental cognition. Such a reading gives, I think, a satisfying answer to the question how Kant can make the necessity-claim that appearances “*must* have grounds that are not appearances”: as long as philosophical reflection on knowledge and its objects is possible do the objects of our knowledge have a ground in such reflection. Furthermore, this reading leaves open the possibility that *some* appearances have a ground in noumenal freedom—as Kant positively argues in his practical philosophy.⁷⁶ But most importantly for the topic of this chapter, the Hinterweltler-reading of Allais and at least the earlier Allison commits the “transcendent metaphysical mistake that Kant is concerned to diagnose in the Dialectic.” This mistake is Transcendental Realism and, to repeat, it entails a failure to take Kant’s hylomorphism into account. As I have argued in this and the previous chapter, a positive claim about things in themselves such that we could say that the nature of appearances is (at least partly) a function of things in themselves involves a claim to objective reality that can only be provided by sensibly given matter.

I want to close with what one might consider a “recalcitrant passage” for my reading. In this passage, Kant writes about imputability in light of the necessity of natural causes and he seems to endorse predeterminism. Kant there says that, in light of his account, ...

... a rational being can now rightly say of every unlawful action he performed that he could have omitted it even though as appearance it is sufficiently determined in the past

⁷⁵ Cf. B769/A741, B381/A324. Stephen Engstrom suggested such a reading in conversation. To be precise, he suggested to understand the “thing in itself” as the object of an infinite cognizer. Whether such a cognizer enjoys purely rational or purely intuitive knowledge is hard to determine—and this may not be a coincidence.

⁷⁶ This is not to deny that Kant addresses this case, the case of human beings as having an appearance-character as well as a “thing in itself”-character insofar as they have a will, also already in the *CPR*. He does so, for example, at B566-9/A538-41.

and, so far, is inevitably necessary; for this action, with all the past which determines it, belongs to a single phenomenon of his character, which he gives to himself and in accordance with which he imputes to himself, as a cause independent of all sensibility, the causality of those appearances.⁷⁷

In this passage, Kant seems to endorse predeterminism, because he says that “as appearance [the unlawful action] is sufficiently determined in the past and, so far, is inevitably necessary.” However, as the remainder of the passage makes clear, this is because we can always consider an action as a necessary result of that person’s character. In order to see how this does not rule out freedom it is helpful to consider the form of psychological explanations. A psychological explanation states how a person, given her character, reacts to a given situation. If *natural causation* has the form that, given the laws of nature, a given condition resulted in a certain effect, then *psychological explanations* can be taken to have the form that, given a person’s character, a given situation resulted in certain behavior. The character thus occupies the position of the laws of nature.^{78, 79} Yet, as discussed above, transcendental freedom consists in our being able to reflect on what character we want to have and to consequently form our character by means of habit. And it is because we have this ability that the actions that flow from our character are imputable to us. In this way, the quoted passage can be understood as holding that imputability is only possible exactly because we can influence our character. This, furthermore,

⁷⁷ *CPtR*, V:98.

⁷⁸ Psychological laws then state that people with a certain character react in a certain way to given situations. This does not rule out further investigations, for example, investigations into the genesis of the specific character types.

⁷⁹ Insofar as, in psychological explanations, ‘character’ occupies the position of laws in nature, Proops is thus right that Kant thinks that we can change the laws of nature. However, this does not mean that we could change the laws of gravitation, say, as Proops believes.

makes this passage compatible with Kant's famous rejection of the "freedom of a turnspit",⁸⁰ where Kant is rejecting conceptions of an utterly inefficacious freedom.⁸¹

There are more passages like this one, some involving counterfactual or, with respect to *transcendental* logic, counter-logical scenarios such as our knowing the entirety of the universe including its past.⁸² The point of invoking such a counter-logical scenario is, I submit, to bring out how our capacity for reflecting on what would be good is independent of natural necessitation—even though predeterminism would in fact turn our freedom into the mere freedom of a turnspit. To my knowledge, these passages can all be addressed in the manner I laid out. I hence claim that the reading laid out in this chapter can make sense of Kant's account of causation and freedom as presented in the Third Antinomy of Reason, and that it is a distinctively Kantian reading insofar as Transcendental Idealism, the two-stem doctrine, Kant's hylomorphism, and the consequent centrality of experience play an important role in this reading.

Conclusion

Once we reflect on issues of metaphysics, we are naturally and unavoidably subject to a transcendental illusion, Kant holds, an illusion that is due to Transcendental Realism.⁸³ This chapter added to the conception of Transcendental Realism I argued for in the last chapter. There, I identified Transcendental Realism in Strawson's arguing from a "view from sideways-on" when criticizing Kant for committing a "non-sequitur of numbing grossness" and in Watkins' relying on the principle of sufficient reason in his account of the Second Analogy. In this chapter, I spelled out what it means to

⁸⁰ *CPtR*, V:97.

⁸¹ This compatibility is all the more needed as Kant's rejection of the "freedom of a turnspit" happens just one page before the quoted passage.

⁸² *CPtR*, V:99.

⁸³ Hence, the antinomies are an "indirect proof" of Transcendental Idealism: we can only overcome the transcendental illusion that gives rise to the antinomies by adopting Transcendental Idealism. (Cf. B534/A506.)

conceive of the concept of nature along transcendently realistic lines and how the problem of free will follows from such a conception. I sought to bring out how easy it happens to think along the lines of Transcendental Realism and how hard it is to detect it in one's own thinking. This is important, I think, because only through the contrast to Transcendental Realism do we get into view Kant's actual position, Transcendental Idealism. In this chapter I furthermore added that adopting Transcendental Idealism means to adopt a hylomorphic reading of Kant. A hylomorphic reading allows for a positive comprehension of Kant's position, insofar as it brings the essential focus on experience into view that comes with Transcendental Idealism more generally and with Kant's two-stem doctrine more specifically. Contra rationalists such as Descartes, Leibniz, and Wolff, Kant holds that without sensibly given matter "nothing at all can be thought." I sought to show that the concept of nature has to be understood hylomorphically, i.e., as the formal concept of the dynamic and ever-progressing unity of all appearances. Once nature is understood in such a way, we can understand Kant to be a determinist who rejects predeterminism. Thereby, Kant can resolve the problem of free will without resorting to a conception of freedom as utterly inefficacious, which is merely the "freedom of a turnspit".

I argued that Kant's resolution of the problem of free will is contained in his resolution of the Third Antinomy of Reason. The significance of the antinomies and of the illusion produced by Transcendental Realism has been doubted. For example, W. H. Walsh claims that "[t]he illusion of which [Kant] speaks was perhaps 'natural and inevitable' to a thinker with Kant's background in rationalist metaphysics, but would be less dangerous for, say, a scientifically-minded positivist."⁸⁴ The persistence of the problem of free will demonstrates that this claim is false, I think. Furthermore, it seems to me that predeterminism and thus Transcendental Realism is quite wide-spread. Stang's and Proops' interpretations of Kant's philosophy, which are no exceptional cases, attest to that. And if I

⁸⁴ Walsh 1997: 173.

am right that it is an expression of Transcendental Realism to philosophize from a fictitious view from nowhere, then philosophers who endorse “Eternalism” in contemporary metaphysics of time might well be taken to occupy a transcendently realistic position. I thus take it that the lesson of Transcendental Idealism is indeed a difficult one and that it is one that is still very much worth learning. One may thus wonder whether Walsh’s statement is not an expression of the very thing he takes to be a thing of the past.

By focusing on Kant’s hylomorphism and the consequent centrality of experience, I argued that Kant’s philosophy involves a principle of causality, including causal necessity, but that Kant rejects predeterminism. In order to make freedom understandable, there is thus no need to separate causality from necessity, as Elizabeth Anscombe has suggested.⁸⁵ As long as we understand nature as a formal concept and, thus, nature to be “open ended” and determinism to hold only locally but not globally, freedom and causal necessity are actually compatible.

How exactly a causality of freedom and natural causation can be unified and how a predeterministic concept of nature is also guiding us in the concept-formation inherent to natural science are topics that help to understand Kant’s position yet more. They are the topics of the next chapter.

⁸⁵ Cf. Anscombe 1981.

Chapter 3

Why Is There an Antinomy about Organisms?

“matter ... is also the highest empirical principle of the *unity of appearances*, and has, insofar as it is empirically unconditioned, in itself the properties of a *regulative principle*” – B646/A618¹

Introduction

Organisms can seem puzzling. They are natural beings, yet they exhibit a structure that eludes the explanatory concepts of the paradigmatic natural science, physics. For, organisms exhibit purposiveness. Their actions and the processes within organisms occur for the sake of something, paradigmatically for their survival. Equally, the internal organization of a living being can be understood only as furthering the ends of the organism as a whole. For example, the heart does what it does *so that* the whole organism is supplied with blood, the lungs add oxygen to the blood *so that* other organs can be supplied with it. Purposiveness, however, is alien to physics. Excising purposiveness is central to modern physics: stones fall to the ground because of universal gravitation or the curvature of space-time, not because their purpose is to seek their natural place at the center of the earth. Does this mean that organisms are not part of nature after all? Or does the very existence of organisms show that physics does not live up to its own explanatory expectations?

According to Kant, neither of these options are acceptable, yet very good reasons seem to speak in favor of each. These reasons run so deep that Kant considers the puzzle about “organized beings” to be a veritable antinomy. Antinomies are of outstanding significance in Kant’s philosophy. For, Kant holds that the antinomies he discusses can only be resolved by overcoming the philosophical position

¹ My italics.

which we naturally adopt, namely, Transcendental Realism. With respect to the antinomies, as we have seen in the last chapter, overcoming Transcendental Realism in favor of Kant's Transcendental Idealism means to recognize the special status that concepts of a totality have, specifically the concept "nature"² or "universe". This special status consists in this concept's not denoting a concrete object but rather in its figuring as an ideal end-point of scientific inquiry, an ideal end-point that we need for orientation but only ever approach asymptotically and never reach.

Kant formulates the antinomy about organisms as a conflict between "mechanism" and "teleology", where "mechanism" relates to the physics of his time, a physics shaped by Descartes and Newton. According to the received view in the literature, the antinomy arises because the principle of mechanism and the principle of teleology are in fact irreconcilable principles—at least for us human beings. The resolution of the antinomy is taken to consist in the logical possibility of a non-human intellect. Such an intellect would not rely on objects being given in space and time in order to have knowledge, as it is the case for us. If such an intellect is a logical possibility, then we cannot exclude that for such an intellect organisms are conceivable as a combination of mechanism and teleology. That is, according to the received view, *we* have to consider organisms to be impossible, yet this predicament is supposed to be resolved by the mere thinkability of a different intellect for whom that is not so.

I consider this reading to be unsatisfactory in several respects. Two central problems are the following. For one, it is not clear how the antinomy is actually resolved on this reading. And then, the received view is not able to make sense of Kant's usage of "mechanism". Kant uses that term to formulate the antinomy. Given that antinomies are, according to Kant, "unavoidable", they come with a certain necessity. It must hence be in some sense necessary to use the term 'mechanism'—or

² Kant's distinction between "world" and "nature" (B446-7/A418-9) is not important for the purposes of this chapter.

whatever is meant by it—in order to formulate the antinomy. Yet, the leading scholars on the topic consider it puzzling how ‘mechanism’ can come with said necessity. Peter McLaughlin, who spearheaded the received view, spelled this puzzle out into a dilemma: it would be an interpretative failure if the necessity of ‘mechanism’ is not shown, yet the only way available renders ‘mechanism’ constitutive of experience, which is unacceptable for systematic and textual reasons. I propose that this dilemma can be solved by 1) taking Kant’s usage of ‘mechanism’ to refer to the concept of nature as a mechanical system, and by 2) a proper appreciation of what it means that this concept is merely an *idea*—in Kant’s technical sense of the term as an ideal, unreachable end-point of scientific inquiry. In this way, the necessity of the concept of mechanism can be shown without rendering it constitutive of experience, the question can be answered why organisms give rise to an antinomy, and a crucial and distinctive feature of Kant’s Transcendental Idealism can come into view, namely, what it means to overcome our natural tendency to misconceive the concept of nature.

The structure of this chapter is as follows. In section I, I survey Kant’s discussion of organisms and their antinomy in the *Critique of the Power of Judgment*. Section II is devoted to the received view about that topic, which is most concisely represented through the interpretations of Peter McLaughlin and Henry Allison. The topic of section III is the concept of mechanism, which I show to stem from our idea of nature as materially unified; a unification that, according to Kant, is only possible by means of the principles of mechanistic physics. This necessary yet regulative idea is a *material* concept of nature, which I distinguish from a merely *formal* concept of nature, which only states the *indeterminate* unity of all objects as the “sum-total of appearances”. In section IV, I show how the concept of mechanism, via the material concept of nature, figures in the antinomy and how insight into this point allows for the resolution of the antinomy. According to my reading, full recognition of our finitude, i.e., of the fact that our knowledge involves a receptive aspect, leads to the insight that the conflicting statements of the antinomy are actually maxims for concept-formation, rather than straightforward

statements about nature as a whole. Contra the received view, this insight resolves the antinomy, because it allows for the “local” unification of mechanism and teleology in organisms as concrete objects of experience. Finally, section V is devoted to the question whether, on my reading, Kant holds that organisms exist in such a way that their teleological structure is indeed objective. I argue for an affirmative answer to that question.

I. The Concept of an Organism and Its Antinomy

Kant’s discussion of organisms in the *Critique of the Power of Judgment*, as focused on the peculiar structure of organisms and the antinomy that structure gives rise to, occurs in §§61-78 of that book. §61 gives a general overview of Kant’s discussion of organisms—or “organized beings”, as he calls them—whereas §§62-8 constitute the “Analytic of the Teleological Power of Judgment”, in which Kant *analyses* the concept of an organism. That is, in this Analytic, Kant addresses the questions “What are organisms?” and “What is peculiar about them?”. §64 contains Kant’s central account of the structure of organisms: they exhibit “natural purposiveness”, which is different from the two kinds of purposiveness discussed before (in §§62-3) in that this kind of purposiveness pertains to things in the world, while being *internal* to them. This determination, Kant says, is tantamount to the claim that an organism “is cause and effect of itself.”³ Using the example of a tree, Kant lays out the peculiarity of organisms by analyzing the concept of a natural purpose into the following three dimensions.⁴

For one, a tree is caused by trees and will cause the existence of further trees. Thus, the species can be said to be cause and effect of itself. Then, an individual tree is cause and effect of itself: it creates itself by turning nutrients into matter of itself. Finally, organisms are also cause and effect of

³ *CPJ*, §64, V:370.

⁴ Cf. *CPJ*, §64, V:371-2.

themselves with respect to their internal constitution. Each organ is caused by the activity of other organs and itself contributes to the creation and maintenance of other organs.

Having thus brought the special character of organisms into view, and after further discussion of the peculiar causality of organisms and of the principle of the science of biology in §§65-8, Kant moves to the Dialectic of the Teleological Power of Judgment (§§69-78), that is, to the antinomy to which that concept gives rise. In §69, Kant details how the antinomy about organisms is an antinomy specifically of the power of judgment and not one of reason and how it is only the *reflecting* power of judgment that can give rise to an antinomy between two of its principles, these principles being *maxims* that guide our formation of new concepts. In §70, Kant lays out the antinomy by presenting two sets of opposed statements about how objects in nature can come about. The first set consists of *maxims* and the second one of simply “theses” or “propositions”. The first set is the following.

The **first maxim** of the power of judgment is the **thesis**: All generation of material things and their forms must be judged as possible in accordance with merely mechanical laws.

The **second maxim** is the **antithesis**: Some products of material nature cannot be judged as possible according to merely mechanical laws (judging them requires an entirely different law of causality, namely that of final causes).⁵

The second set is almost identical in content, save for the absence of the words “must be judged” and “form”:

Thesis: All generation of material things is possible in accordance with merely mechanical laws.

⁵ *CPJ*, §70, V:387.

Antithesis: Some generation of such things is not possible in accordance with merely mechanical laws.⁶

It is noteworthy that Kant formulates the antinomy by focusing on the *generation* of things,⁷ specifically the *possibility* of the generation of things, that he uses the term “mechanical laws”, and that he does not directly mention the peculiar form of organisms. The latter is present merely indirectly, as an exception to the generation according to mechanical laws. This means that the antinomy concerns the explanation of how things *come to be* in nature, specifically whether such an explanation is always a mechanical one or whether a mechanical explanation is sometimes not possible. However, how these sets of statements are to be understood and what exactly the significance is of Kant’s presenting the antinomy in this way is part of the scholarly debate, to which I turn in the next sections.

Notwithstanding the contested nature of this topic, I want to briefly state the main line of what I take to be the resolution of the antinomy. I think that we overcome the antinomy when we recognize that our thinking that organisms are puzzling and our taking the two maxims to contradict each other rest on a natural confusion. This natural confusion consists in our naturally misunderstanding the concept of objectivity and what it means that we are dependent on our senses in order to have knowledge. This confusion makes us think that the maxims of the reflecting power of judgment have the status of indicative statements about the world, statements for which the relevant faculty is *not* the reflecting but the *determining* power of judgment. Once this confusion is overcome, it turns out that the antinomy was a mere appearance:

⁶ Ibid.

⁷ Daniel Warren has pointed out to me in conversation that this indicates that what is at issue in the antinomy about organisms is whether organisms could have formed merely on the basis of the powers of matter alone—as Kant thought that solar systems did. This line of interpretation, which is part of Hannah Ginsborg’s reading, seems to me to be a central issue of the antinomy indeed. However, the question of the objectivity of natural purposiveness is equally present, if not more pressing. Furthermore, the questions of how the antinomy exactly arises, why Kant uses the term ‘mechanism’ to formulate it, and how exactly the antinomy is resolved also need to be addressed. My interpretation focuses on these questions.

All appearance of an antinomy . . . rests on confusing a fundamental principle of the reflecting with that of the determining power of judgement . . .⁸

That is, we have the natural tendency to unduly award principles for finding new concepts with objective reality, thereby mistaking them for principles that hold unqualifiedly of nature, rather than just for our capacity to create new concepts.

After this overview of Kant's discussion of the peculiarity of organisms, we can turn to the received view.

II. The Received View: McLaughlin and Allison

What is currently the received view is best introduced as a reaction to what was the received view some forty years ago. Already held by early 20th century scholars such as Ernst Cassirer and Erich Adickes,⁹ the then prevalent reading was in important respects the one I laid out at the end of the last section; namely, that the antinomy occurs because we naturally confuse the first set of statements above, the maxims of the reflecting power of judgment, with the second set of statements, statements that would be principles of the determining power of judgment. The basic thought of this old reading is thus: once we come to recognize that said confusion lies at the bottom of our puzzlement about the possibility of organisms, the antinomy is overcome. For, there is actually no contradiction among the maxims of the reflecting power of judgment. Such a reading, which I seek to rehabilitate in a strongly revised form, can be called "confusion-reading".

⁸ *CPJ*, §71, V:389. A further exemplary passage is from *CPJ*, §77, V:405, where Kant says that the causality of organisms "seems to make the idea of a natural end into a constitutive principle of nature."

⁹ Cf. McLaughlin 1990: 138n5 and McFarland 1970: 120-1n for a list of these interpreters.

This reading was influentially criticized by McLaughlin, who was joined by Allison,¹⁰ Ginsborg,¹¹ Watkins,¹² Haag,¹³ Breitenbach,¹⁴ Kreines,¹⁵ Cohen,¹⁶ and many more so that McLaughlin's view is now the received view. One of McLaughlin's chief criticisms is that the then received view *identifies* Kant's concept of "mechanism" with the one of *causality* as discussed by Kant in the Second Analogy of the *Critique of Pure Reason*. Given Kant's statements about the mechanistic principle being a *regulative principle*, this identification has the consequence that also the principle of causality would have to be a merely regulative principle. This is a problem, because it is a pillar of Kant's philosophical edifice that causality is *constitutive* of experience and not regulative.¹⁷ Next to this crucial criticism, McLaughlin says that the "most important reason" against the confusion-reading is that the maxims do in fact *contradict* each other.¹⁸ McLaughlin's conviction regarding this "most important reason" makes him claim that if a confusion-reading à la Cassirer is correct as a reading of Kant, then Kant is wrong:

However ambiguous some of Kant's later statements may be, it must be acknowledged that the contradiction involved in the formal statement of the antinomy by no means disappears simply because Kant can be interpreted as reporting that it is gone. That is, if Cassirer and the others are *correct* in their interpretation of Kant's meaning, then

¹⁰ Cf. Allison 1992.

¹¹ Ginsborg concurs with McLaughlin's rejection of confusion-readings, holding that the maxims contradict each other. Cf., e.g., Ginsborg 2001: 236. Yet, Ginsborg (correctly) criticizes McLaughlin for his assimilating of mechanical generation to the creation of a *machine* by an artificer.

¹² Cf. Watkins 2009.

¹³ Haag agrees with McLaughlin in the latter's contention that it is primarily the invocation of the limiting concept of the intuitive intellect that resolves the antinomy. Cf. Haag 2015: 227-31.

¹⁴ Breitenbach declares her agreement with McLaughlin that a confusion-reading cannot be right. (Breitenbach 2008: 354) Yet, she herself says that her ultimate view is quite close to a confusion-reading.

¹⁵ Kreines concurs with McLaughlin's Hegelian claim that the antinomy does not go away by recognizing thesis and antithesis to be maxims. Cf. Kreines 2005: 297, 303.

¹⁶ Cohen agrees with McLaughlin's account of the antinomy and how it would have to be resolved, but claims that Kant's resolution of the antinomy fails because Kant cannot give a robust account of the unification of mechanism and teleology in the supersensible ground pointed to by the limiting concept of the intuitive intellect. Cf. Cohen 2004: 193-4.

¹⁷ B692/A664.

¹⁸ McLaughlin 1990: 139.

Kant *himself* is wrong. Hegel ... was well aware of this problem and drew precisely this conclusion.¹⁹

McLaughlin thus insists on the maxims being contradictory, even if Kant seems to say something different. The maxims are certainly different from each other; they prescribe “different directions” of concept formation. But why is it a problem that the two maxims prescribe a different “direction”? (While I focus in this chapter on McLaughlin’s view, it is at some points instructive to draw on Allison’s work, who, regarding certain questions, spells out the received view further.) Allison answers this question by holding that not only empirical judgments but also regulative maxims bring with them an “ontological commitment”,²⁰ i.e., a commitment to stating how things are in nature:

...if I am committed to the search for mechanistic explanation as a single and sufficient research strategy, I am not only presupposing that all phenomena in nature can be accounted for in mechanistic terms, I am also committed to the belief that they were in fact produced mechanistically ... Correlatively, if I hold that certain classes of phenomena (organic beings) require a different mode of estimation, it is because I am committed to a belief about how such phenomena are possible.²¹

That is, Allison claims that the maxims are contradictory because they come with a claim regarding how the thing in question in fact came about. Specifically, the generation of the thing in question must be either mechanistic or teleological.

From these criticisms it can already be gathered that for today’s received view, the antinomy arises and holds for the regulative principles that comprise the first set of statements. This set of statements

¹⁹ McLaughlin 1989a: 361.

²⁰ Cf. Allison 1992: 31.

²¹ Ibid.

I will henceforth call “maxims_{RPJ}”. Kant’s mentioning of the second set of statements, henceforth “principles_{DPJ}”, is considered to be a side-issue, mentioned by Kant only so as to clarify that this antinomy is not one of pure reason, but one of the power of judgment. That is, the *maxims* of the reflecting power of judgment are considered to be *contradictory*, which is why this reading can be called “contradictory maxims-reading”.

This contradiction between maxims is the received view’s answer to the question what the antinomy about organisms consists in. A further central question is how the antinomy is resolved. According to McLaughlin, Kant’s invocation of an “intuitive intellect” in *CPJ* §77 is central to the resolution of the antinomy. The concept of an intuitive intellect is formed, I submit, in the following way. For us, there is a certain *contingency between more and less general concepts* insofar as we are *dependent on experience* in order to know what lower concepts fall under a higher concept, e.g., what laws of nature there are concretely. Now, Kant holds, we understand this aspect of our mind better by contrasting it with an imagined concept of a different kind of intellect to whom this contingency does not apply. The concept of an intuitive intellect is a “limiting concept”,²² because this concept is *formed by negation* of the concept of *our* intellect. Limiting concepts are merely negative and thus quite indeterminate. McLaughlin now holds that Kant’s invocation of the concept of an intuitive intellect makes us realize that we *cannot explain everything* there is and that we will thus give up on the idea of explaining everything there is mechanically. It is in this way, McLaughlin thinks, that the antinomy is resolved.²³

In his account of the resolution of the antinomy, Allison agrees with McLaughlin’s contention that the invocation of the limiting concept of an intuitive intellect plays a central role, yet Allison’s account differs in the function it assigns to this invocation. Rather than making us give up on the idea

²² Cf. Haag’s insightful discussion at Haag 2015: 226-31. Cf. also Conant’s expanding on the concept of a limiting concept at Miguens 2020: 436-441.

²³ Cf. McLaughlin 1990: 161-3, 168.

of being able to explain everything, Allison thinks that the invocation of the intuitive intellect makes the ontological commitment of the maxims go away:

Kant takes the bare conceivability of such an intellect to show both that our discursive understanding is not the only (logically) possible form of understanding and that our peculiar manner of estimating living organisms reflects a merely subjective necessity, which, as such, cannot lay claim to objectivity, even with respect to appearances (V:408).²⁴

Allison considers this deprivation of a “claim to objectivity”, i.e., of ontological commitment, to be key to resolving the antinomy.²⁵

It can, however, be critically remarked that it is not clear how exactly the limiting concept of an intuitive intellect brings it about that maxims, *and only maxims*, lose an ontological commitment they otherwise are supposed to have. Unfortunately, Allison does not spell this out further. Equally, it is not clear how the invocation of a limiting concept, given its indeterminacy, can bring about the alleged insight that we are not capable of explaining everything, as McLaughlin holds. But even if we leave the issue of the indeterminacy of limiting concepts aside, how does the invocation of a superior intellect amount to the view that we can explain *some but not all* things? Why is thereby not all our ability to explain abolished?

These unclaritys are already indicative of the problems that the received view faces regarding the resolution of the antinomy. Besides these unclaritys, the received view also has a problem with respect to the concept of mechanism. For, how is that concept to be understood? And why is Kant using that

²⁴ Allison 1992: 36. I adapted the quote to conform to my way of citing Kant’s works.

²⁵ Allison 1992: 38. Correlatedly, Allison claims on p.37 that also with respect to the unifiability of the maxims does the resolution of the antinomy rest on a limiting-concept, this time the limiting-concept of a supersensible ground of nature.

concept in order to formulate the antinomy? Twenty-five years after having introduced the received view, McLaughlin himself brings the problem into view by asking “Can Mechanism be Necessary and Still be Merely Regulative?” After discussing the options he takes to be available, his verdict is that this question confronts us with a dilemma: either Kant’s commitment to mechanism has to be considered as Kant’s simply adopting, without argument, 18th century orthodoxy, or mechanism is rendered constitutive of experience.²⁶ In the former case, the antinomy would not be necessary, whereas in the latter case the antinomy could not even arise, because experience could only have mechanistic structure, which renders experience of organisms impossible. In the next two sections, I discuss these problems in more detail and show how my reading can solve them. I begin with the problem about the status of the concept of mechanism.

III. The Idea of Mechanistic Nature

This section is structured as follows. In order to address McLaughlin’s dilemma of mechanism being either not necessary or constitutive of experience, I first state what ‘mechanism’ is. Then, I lay out how experience of organisms is possible by applying the category of causality. This account brings into view how *two concepts of nature* can be distinguished. Kant’s account of how experience is possible in general gives rise to a concept of nature that can be called “formal”, whereas Kant’s elaborations on the empirical concept of *matter* in the *Metaphysical Foundations of Natural Science* give rise to a concept of nature as *materially unified* on the basis of *mechanistic principles*. I call this latter concept of nature “material”. Having distinguished these two concepts of nature, I move to the last and biggest part of this section, in which I show how the crucial step in the solution of McLaughlin’s dilemma consists in the recognition that the metaphysical concept of nature is a *mere idea*. This means that this concept

²⁶ McLaughlin 2014: 158, 162-3, 164. Note that in this essay, McLaughlin focuses on the part-whole relationship, which I address only indirectly.

does not have objective reality,²⁷ but merely guides us in our inquiries into nature. Said guiding function is expressed in Kant's statement that all "improper sciences" such as chemistry and biology are to be *modeled* on mechanistic physics,²⁸ and in his statement that chemical explanation is based on "the idea of a mechanism".²⁹ Qua mere idea, the mechanistic conception of nature does *not exclude* the experience of chemical phenomena, organisms, or human agency. It is only when we consider the idea of nature to have objective reality in a direct and determinate way—and Kant says that we have a natural tendency to do so³⁰—that we think that experience and explanation of organic phenomena are excluded. This seeming exclusion is central to the antinomy about organisms arising. Overcoming our natural tendency to consider ideas to have objective reality, which is tantamount to adopting Transcendental Idealism, constitutes, I submit, the solution to McLaughlin's dilemma—while it also is a crucial step in the resolution of the antinomy.

So, what is "mechanism" and why and in what sense is a mechanical conception of nature necessary? In the *Critique of the Power of Judgment*, Kant uses "mechanism" or "mechanical" in several ways. Central usages are for Kant to write of "mechanism as causal determination of nature",³¹ of "the mechanism of blindly acting causes",³² of "laws of causality about the mere mechanism of nature",³³

²⁷ Ideas do not have objective reality in a direct and determinate way because no intuition corresponds to them. Kant writes: "... to no concept can its objective reality be secured, save insofar as it can be presented in a corresponding intuition (which for us is always sensory), so that beyond the bounds of sensibility and thus of possible experience, there can be no cognition whatever." (*On a Discovery*, Preface, VIII:188-9) Cf. also: B383/A327; *On a Discovery*, VIII:201.12-7, 206.28-30.

²⁸ Cf. *MFNS*, Preface, IV:467-9.

²⁹ B674/A646. Carrier 2001 gives a helpful account of Kant's views on chemistry; in relation to this quote, esp. p.222.

³⁰ Dialectical inferences, Kant says, deal with "a problematic concept ... to which we nevertheless, by an unavoidable illusion, give objective reality." (B397/A339). At B510/A482, Kant says that the natural misunderstanding of the antinomies arises regarding the nature of the idea in question, because "we stubbornly insist on an actual object corresponding to it."

Note: the concept of nature does not have objective reality in the direct way in which an (empirical) concept of concrete objects has objective reality. Ideas such as 'nature' have objective reality in an indirect and indeterminate way. (Cf. B691-4/A663-6.)

³¹ *CPJ*, §77, V:406; cf. also *CPtR*, V:97.

³² *CPJ*, §67, V:381.

³³ *CPJ*, §61, V:360.

“mechanical laws of nature”,³⁴ of “mechanism (according to mere laws of motion)”,³⁵ and his writing of a “mechanical kind of generation” when considering a material whole to be, with respect to its form, the product of its parts and their forces and powers.³⁶ In general, Kant contrasts “mechanism” with “technique of nature”, i.e. a natural yet purposive arrangement or generation.³⁷ Kant thinks that we can ultimately only conceive of purposiveness as stemming from an agent who represents the correlative purpose in her mind. The following quote from Kant’s unpublished, first draft of an introduction to the *CPJ* expresses said contrast:

Now I would call the **causality** of nature with regard to the form of its products as ends the **technique** of nature. It is opposed to the *mechanics of nature*, which consists in its causality through the combination of the manifold without a concept lying at the ground of its manner of unification...³⁸

This quote raises the question what a non-conceptual unification consists in. In the *Progress-essay*, Kant is particularly clear about this question. There, he says that we can represent objects in space only by adding spaces to each other; and that hence we represent everything in space (and time) as a *composite*.³⁹ Representing an object as a composite involves our using the concept of a composite, but we do not thereby assume that this object *came about* due to the guidance of a concept, as in the case of an agent creating an artefact. We can thus say that Kant’s concept of mechanism centrally involves that phenomena are explained by causal laws of motion, as stated in the previous paragraph, or by the *composition* or *addition* of laws that describe *constituent forces and powers* in order to account for higher-

³⁴ *CPJ*, §72, V:390; cf. also §70, V:387.

³⁵ *CPJ*, §72, V:390.

³⁶ *CPJ*, §77, V:408.

³⁷ *CPJ*, §61, V:360; §64, V:369; §66, V:376; §66, V:377.

³⁸ *FI*, XX:219; my italics.

³⁹ *Progress*, XX:271.

order phenomena that are not immediately recognizable as being explainable by laws of motion.⁴⁰ That is, a phenomenon is *explained mechanistically* when changes in it can be directly explained by means of a causal law of motion, or if we can decompose that phenomenon into parts in such a way that these parts are subject to causal laws of motion and the change in the original phenomenon can be explained by adding up the changes in the parts.

In a pre-Critical writing from 1763, Kant states the range of different phenomena that he thinks can in principle be explained by the moving forces and laws of mere matter, with matter being Kant's concept for mere space-filling.⁴¹ He there says:

It is with good reason presumed that the expansion of bodies through heat, light, electric force, thunder, perhaps even magnetic force are many kinds of appearance of one and the same effective [wirksam] matter which is spread out in all spaces...⁴²

As Hannah Ginsborg has argued,⁴³ the listed phenomena are taken to be “many kinds of appearance” of their underlying matter insofar as they can be explained by means of forces and corresponding laws of motion of the underlying matter.

A further important passage about Kant's usage of mechanism can be found in the *Critique of Practical Reason*. There, Kant says:

[A]ll necessity of events in time in accordance with the natural law of causality can be called the *mechanism* of nature, although it is not meant by this that the things which are

⁴⁰ Thus, Kant's conception of mechanism links up with a more general account of mechanism that originated in early modern philosophers such as Descartes, Locke, and Boyle. (For a description of classical mechanistic philosophies, cf. Ayers 1991, Volume II: 135, or Gaukroger 2010: 58.) Martha Brandt Bolton describes this conception as “[t]he picture that what transpires in the world is due to the additive resolution of interacting tendencies,” (Brandt Bolton 1998: 196) and that “physical forces ... produce motion by combining in mechanical, additive ways.” (Brandt Bolton 1998: 197.)

⁴¹ Cf. *MFNS*, IV:496, 481.

⁴² *Only Possible Argument ...*, II:113; I took over Ginsborg's amendments of the translation at Ginsborg 2001: 242.

⁴³ Cf. Ginsborg 2001: 241-2.

subject to it must be really material *machines*. Here one looks only to the necessity of the connection of events in a time series as it develops in accordance with the law of nature.⁴⁴

That Kant talks here of the “necessity of events in time in accordance with the natural law of causality” suggests the connection to Kant’s discussion of causality in the Second Analogy of Experience in the *first Critique*. Given the question of the necessity of the antinomy this connection seems to be welcome, as it could then be said that ‘mechanism’ is basically to be equated with ‘causality’; and of causality Kant has demonstrated the necessity in the Second Analogy by arguing that only with that concept, we can account for the experience of objectively occurring events. This would be a straightforward way to vouchsafe that the antinomy about organisms occurs necessarily.⁴⁵ Yet, connecting mechanism and causality in this way raises the objection that it would make mechanism constitutive of experience.⁴⁶ This would mean either that organisms could not be an object of experience at all, or that the resolution of the antinomy renders causality regulative for experience, while Kant is explicit that it is constitutive of experience. The former would make it impossible for the antinomy to occur in the first place, whereas the latter would mean for Kant to “abandon ... one of the fundamental pillars of his system.”⁴⁷ These two options constitute the second horn of McLaughlin’s dilemma, which leaves us at a loss as to how Kant’s usage of “mechanism” can be understood.

In the scholarship, surveys of the usages of “mechanism” in Kant’s *œuvre* can be found.⁴⁸ Yet, these surveys just differentiate between wider and narrower usages of mechanism and thus do not

⁴⁴ *CPvR*, V:97.07-13; translation amended. Note about the concept “machine”: At *FI*, XX:219 Kant says that an inclined plane can be called a machine, but not an artefact.

⁴⁵ Next to Guyer (Guyer 2001: 264) and Butts (Butts 1990: 4), among others, also Zuckert identifies mechanism with causality when trying to make mechanical inexplicability understandable by focusing on the temporal relations involved (Zuckert 2007: 138-9).

⁴⁶ McLaughlin 1990: 140-4. McLaughlin is joined in this argument by Ginsborg (2004: 37), Allison (1992: 27-8), Kreines (2005: 302n54), and Watkins (2009: 204-5), among others. This sound argument is one of the main attractions of the received view. I think that a confusion-reading must—and indeed can—accommodate it.

⁴⁷ McLaughlin 1990: 144.

⁴⁸ Cf. Allison 1992: 26-8 and Ginsborg 2001: 238-40.

address the first horn of McLaughlin's dilemma. That is, while these surveys provide initial clarity, they leave unanswered why Kant uses the term 'mechanism' in all of these cases, with the systematic consequence that it is not clear why organisms should give rise to an antinomy rather than to a puzzle that is based on an arbitrarily adopted concept of mechanism.

I submit that the unity and specific necessity of the concept of mechanism such that it occurs in the antinomy about organisms can come into view by differentiating between two senses of "nature". Nature in the first sense is nothing but the sum total of all experience.⁴⁹ On this level of abstraction or formality, nothing is said about what objects there are in nature and how specifically they are related or unified. One could thus call it the *formal concept of nature*.⁵⁰ I want to distinguish this concept of nature with one that could be called "nature as materially unified". While still a *very* general concept, nature in this sense has more content than the formal concept of nature; for it does contain material principles according to which objects of nature in the first sense can be unified. In what follows I argue that these principles are those laid out by Kant in the *MFNS* and that thus "nature as materially unified", but *not* the formal concept of nature, is a *mechanistic* conception of nature. I call this second sense of nature the *material concept of nature*.⁵¹ The formal concept of nature is oriented by and towards nature in the material sense, because the latter is to be identified with our *idea of nature*. Qua idea, however, 'nature as materially unified' has objective reality only in an indirect and indeterminate way and is nothing that could ever be fully realized—though we continually and perennially strive to approach it asymptotically.

⁴⁹ Cf. B163; B263/A216; *Prolegomena*, §16, IV:295; *MFNS*, IV:467; B252/A206-7.

⁵⁰ Note that this is a *different* distinction between formal and material nature than the one that Kant makes at *MFNS*, Preface, IV:467. The distinction I am making is between senses of "material nature" as Kant defines it there.

⁵¹ Cf. n 50 above. To be true to Kant's terminology at *MFNS*, IV:467, this sense of nature would have to be called the "material concept of material nature" or "the concept of material material nature". Note that what I call the material concept of nature seems to be, perhaps confusingly, what Kant calls "'nature' taken substantively (materialiter)" at B446-7/A418-9. That is, what I call the formal concept of nature can be identified with "nature ... in its *material* meaning" (IV:467), whereas what I call the material concept of nature can be identified with "'nature' taken substantively (materialiter)" (B446-7/A418-9).

In order to make this distinction between senses of nature plausible, I first give an account of how experience of organisms is no problem and how, thus, organisms are part of nature in the formal sense. The Categories and the Principles of the Understanding, as laid out by Kant in the Transcendental Analytic of the *CPR*, can be unproblematically applied to anything that we perceive. For example, what persists in time is to be conceptualized by a substance-term, whereas changes of something that persists are to be conceptualized by an accident-term; the unity with other experiences (and of the cognizing subject) is established by considering these changes to be the effect of a cause. In this way, by making judgments about substances, we can have experience of whatever we perceive to persist in time: stones, clouds, pencils, people, ducks, ...⁵² The crucial point here is that we can have experiences of all kinds of things without yet knowing how exactly these different experiences can be *materially* unified. With respect to *seeing* organisms and making *judgments* about them, organisms pose no problem because organisms persist in time just like rocks and chairs do. They are hence subject to the most basic workings of the determining power of judgment as laid out in the Transcendental Analytic of the *first Critique*.⁵³ For example, if a property—or, in Kantian terms, an accident—of an organism changes, then there must be a cause for it. This is so even if we cannot yet tell for sure what that cause is; or, should we have a sense of what the cause is, if we do not yet know how exactly that cause brings about its effect. It is thus not a problem for the experience of an organism as teleologically structured that this experience is necessarily informed by the principle of cause and effect. The Transcendental Analytic only says that changes of accidents must have *some* cause. As long as we stay on this level of indeterminacy, of there only having to be *some* cause, it is perfectly possible for that

⁵² Cf. B692/A664, where Kant says that the Principles of the Understanding are *constitutive of experience*.

⁵³ Not all, but several scholars agree on this point. E.g., McLaughlin 2014: 151; Allison 1992: 26-8; and Quarfoot 2004: 206.

cause to involve teleology; as when the shape of a rock is to be explained by a person having made it thus or when a glass' toppling over is to be explained by the toppler's intention to distract.

Thus, the Transcendental Analytic only tells us how it is possible to experience persisting things *in general*. It formulates how substances, and their accidents, can *in general* be related; but it does not tell us anything about what substances and accidents exactly there are in the world and how exactly they are related. Finding this out in a systematic way is the business of natural science. Inquiry into how our experiences of organisms hang together, i.e. biology, is also unproblematically possible. In addition to the principle (and definition) of organisms stated in *CPJ* §66, we can use the principles of causality and causal interaction in order to find out that water makes plants grow or that, in a certain ecosystem, changes in the population of foxes cause changes in the population of hares and vice versa.

Once we do biology, however, the concept of nature as materially unified comes into play and thus the antinomy about organisms. For, when we do natural science, we want to *unify* what we experience. A body of knowledge is properly unified, Kant holds, when it is *systematic*;⁵⁴ and a thoroughly systematic body of knowledge Kant calls a *science*. But given that we want to unify what we experience when doing natural science, the question arises sooner or later *whether different natural sciences can be unified*. For this issue it is relevant that Kant thinks that there is only *one proper natural science*: mechanical physics. Natural sciences such as chemistry, biology, and geology are only “improper sciences”. They are improper because they cannot fully realize the demand for unity, i.e., they cannot be thoroughly systematic vis-à-vis our other cognitions. The reason for this is that the highest laws or principles of improper natural sciences will always be merely empirically justified, and that means that these principles are only *contingently* true. Contingency, however, is exactly the *absence* of systematicity

⁵⁴ Cf. B860-1/A832-3; *MFNS*, Preface, IV:467-8. Mathematics and logic are for Kant also sciences, although no natural sciences. (Cf., e.g., *Logic*, IX:13.)

and hence unity. That is, as long as the principles of a natural science are only contingently true, they cannot be unified with the rest of experience, i.e. the rest of our theoretical knowledge.⁵⁵

Despite their status as improper natural sciences, there is still the *demand* for improper natural sciences to be unified with all of our experiences. This demand is present, I would argue, because all of the experiences that we try to unify in improper natural sciences are things we can experience; and that all of these experiences can be had by one mind means that they must belong to *one* nature. It follows from all of this that the only way for our conception of nature—*formally* characterized as the sum total of the objects of experience⁵⁶—to be unified in a *material* sense is by means of the one science that can realize thorough systematicity by having non-empirical, i.e., a priori principles: mechanical physics, or as Kant calls it: the general doctrine of body.⁵⁷ Physics is for Kant, as he lays out in the *MFNS*, centrally *mechanical*. How Kant understands “mechanical” here can be understood by considering the principles of “mechanics” laid out in the *MFNS*. These principles govern “matter”, i.e., whatever fills space,⁵⁸ with this matter being movable in space,⁵⁹ and where such movement is to be explained by some kind of repulsive force as well as some kind of attractive force.⁶⁰ Of this matter, the mechanical principles say that changes are changes in motion, that they occur due to an external cause, that action equals reaction in interactions, and that the quantity of matter remains the same in

⁵⁵ Cf. *MFNS*, Preface, IV:467-9. I am indebted to Angela Breitenbach’s reading of the relation between proper and improper sciences in Kant in Breitenbach 2021. In this text, she claims that 1) systematicity, 2) being structured by ground-consequence relations, and 3) necessity of the laws of a body of knowledge are “increasingly restrictive characterizations of science” (p.62). I do not think, however, that these are increasingly restrictive criteria, but rather that true fulfillment of one of these dimensions is only possible by true fulfillment of the other two.

⁵⁶ *Prolegomena*, IV:295; *MFNS*, Preface, IV:467; cf. B163.

⁵⁷ Cf. *MFNS*, Preface, IV:467, 471, 472.

⁵⁸ Matter is the minimal determination of something that fills space. That is, whatever is given to us through our senses—and that can be significantly richer than mere matter—will obey the laws governing mere matter. These laws thus have a priori validity and are not merely contingently true—despite being based on the empirical concept of matter: once “the empirical concept of a body (as a movable thing in space) [is] made the ground of th[ese] proposition[s]” they “can then be understood fully *a priori*.” (*CPJ*, Introduction, V:181.)

⁵⁹ Cf. *MFNS*, *Phoronomy*, IV:480-1.

⁶⁰ Cf. *MFNS*, *Dynamics*, IV:496-9.

such interactions.⁶¹ That, according to Kant, physics thus understood is the only body of knowledge about nature that has *a priori principles* means that *our only hope for a materially unified conception of nature* lies in a conception of nature that is unified by means of mechanical principles, i.e., a conception of nature without need or room for non-mechanical explanations. This conception is what I call the material concept of nature.

Having thus clarified the concept of mechanism, we can turn to the question how it figures in the antinomy about organisms. For, it is with the concept of nature as thoroughly unified by means of mechanical principles that the structure of organisms clashes.⁶² That is, the antinomy occurs when we reflect on the peculiar form of organisms and how the complete, material unification of nature could be possible.⁶³ In *CPJ* §§72-3, Kant maps out the existing philosophical positions as reacting to this problem about organisms in two ways: either they effectively deny that there is any purposiveness in nature, and thus deny that organisms have a purposive structure, or they say that all of nature is endowed with purposiveness. Yet, as it is always the case with the combating parties in an antinomy, Kant holds that there is an underlying assumption to this debate that both parties share unwittingly and that he identifies as the true source of the problem. As in all other antinomies, also in this antinomy the shared presupposition of the belligerent parties is, I hold, Transcendental Realism.⁶⁴ What does Kant mean by Transcendental Realism? As I have argued in the previous chapters, to answer that difficult question and what it means to overcome Transcendental Realism lies at the very heart of Kant's philosophy. In the present context, it can be approached in the following way. First, note that both the Transcendental *Dialectic* in the first Critique and the *Dialectic* of the Teleological Power of

⁶¹ Cf. *MFNS*, *Mechanics*, IV:541-7. Cf. also Breitenbach 2008: 357-8.

⁶² Cf. *CPJ*, §70, V:386-7, especially V:386.21-8.

⁶³ For an illuminating discussion of the concept of reflection in Kant, cf. Boyle 2022.

⁶⁴ Allison's paper on the antinomy of the teleological power of judgment is oriented by the question in what way also this antinomy rests on the assumption of Transcendental Realism. I am indebted to Allison's approach in this paper and to his work on Transcendental Realism more generally (cf., e.g., Allison 2004: 21-34). Yet, I argue below that at least in his essay on the antinomy about organisms, Allison has not fully excised his thinking from Transcendental Realism.

Judgment treat of the unconditional unity of appearances and our natural tendency to misunderstand it. And just as the transcendental illusion in the Transcendental Dialectic comes about by our natural endorsement of Transcendental Realism, which makes us think that ideas have *objective reality* in a direct and determinate way *rather than merely a guiding function* for our scientific endeavors,⁶⁵ so it is the case in the Dialectic of the Teleological Power of Judgment. More concretely, the antinomy about organisms arises because of our natural tendency to misunderstand the idea of nature as completely, materially unified. Also here the crucial point is that this idea can in principle *not be realized*. For, as Kant has argued in the Antinomies of Reason in the *first Critique*, it is in principle impossible to have experience of everything there is, while reality can only be ascribed directly and determinately to concepts of experienceable objects. The idea of nature as completely, materially unified, like all ideas in Kant's technical usage of the term, only *guides* us in our empirical inquiries into what there is. Put differently, unifying all of our experience by means of a priori principles is something we *do*, it is *a project* we engage in, not something that is already realized—or even *could* be fully realized, given that space and time have no end. The mistake of Transcendental Realism, as I would put it, is to take the concepts 'objective reality' and 'objectivity' out of their proper application to empirical representations and judgments⁶⁶ and to surreptitiously apply them to the concept of nature, thereby missing the latter's character of being an idea.

I hold that one of the ideas of nature that we hypostatize in the antinomy about organisms is the material concept of nature. Kant says that this concept is actually an idea in the following quote from

⁶⁵ Cf. B397/A339 and n 27 above. More generally, *Transcendental Realism* assumes that how things really are is independent of our power for knowledge. This entails that how things really are is in principle disconnected from our ability to know them. Cf. A369 for Transcendental Realism's assuming that space and time exist independently of our sensibility and that things in the world have no connection to our sensibility, and thus to our ability to know them. Cf. B519/A491 for the statement that the transcendental realist assumes that her thoughts refer to how things are independently of our ability to know them.

⁶⁶ Cf. B142; *Logic*, IX:64-5.

the *MFNS*. In this quote, he emphasizes that the concept of nature as structured by the principles laid out in the *MFNS* has, for one, indeed merely a guiding role, and then, that this concept is guiding all other natural scientific investigations.

[A]ll natural philosophy consists ... in the reduction [Zurückführung] of given, apparently different forces to a smaller number of forces and powers that explain the actions of the former, although this reduction proceeds only up to fundamental forces, beyond which our reason cannot go. And so metaphysical investigation [as carried out in the *MFNS*] *is useful only for the purpose of guiding natural philosophy*, so far as this is ever possible, to explore dynamical grounds of explanation. For these alone permit the hope of determinate laws, and thus a true rational coherence of explanations.⁶⁷

That is, not only in the preface but also in the body of the *MFNS* does Kant write of the *regulative character of mechanical physics* for the rest of natural science. This coheres with Kant's claim, already mentioned above, that *chemical explanation* is based on "the idea of a mechanism",⁶⁸ his statement that "matter ... is also the highest empirical principle of the *unity of appearances*, and has, insofar as it is empirically unconditioned, in itself the properties of a *regulative principle*",⁶⁹ and his statement, in the *second Critique*, that "in appearances ... the mechanism of nature must ... constitute the only *guide*".⁷⁰ Kant's main point regarding the concepts of mechanism, organism, and nature is thus the following.

Only if we confuse the concept of the complete, material unity of nature with a concept which has objective reality in a direct and determinate way do we think that organisms cannot possibly be in nature. For *then* their purposiveness would really disqualify organisms from being in nature. Put

⁶⁷ *MFNS*, *General Remark to Dynamics*, IV:534; my italics. Cf. also: *Metaphysics Mrongovius* XXIX:772; B676-79/A648-51.

⁶⁸ B674/A646. Carrier 2001 gives a helpful account of Kant's views on chemistry; in relation to this quote, esp. p.222.

⁶⁹ B646/A618; my italics.

⁷⁰ *CPrR*, V:30; my italics.

differently, if nature conceived of as a mechanical system were a polished block of iron sitting in front of us where we can have all parts (more or less) simultaneously in view, then we could and would claim that the material concept of nature is fully realized—all parts of it are actual—and that thus there is no room in nature for a non-mechanical form such as purposiveness. But if that concept of nature is only an idea, then it does not have objective reality in the way that a concept has where we can have an instance of that concept in perceptual view. If the concept of nature is merely an idea, then this concept merely guides us in our experience without fixing the content of our experience; and it is not precluded that we can encounter substances in our experience that exhibit a purposive structure.

The point that the material concept of nature is a mere idea and that thus the experience and existence of organisms cannot be ruled out can also be argued for in the following way. Both in the Appendix to the Transcendental Dialectic in the *CPR*⁷¹ and in the Introduction to the *CPJ*,⁷² Kant points out that our attempts at unifying our experience are to some degree at the mercy of what is, receptively, given to us in experience. It is because of this dependence on what is given to us in experience that our a priori conception of nature cannot “rule ahead” and fix what can be experienced prior to our actual experience. Therefore, the fact that our a priori concept of nature as materially unified is mechanical does not preclude that in our actual experience we happen upon substances that exhibit an unexpected structure.

In sum, Kant’s concept of nature as materially unified is mechanical because only a science with necessary principles can possibly unify all of our experience. In the *MFNS*, Kant demonstrates the necessity of the principles of the general doctrine of body—insofar as these principles can be constructed merely on the basis of the concept of matter. While these principles are not

⁷¹ B681-2/A653-4.

⁷² *CPJ*, Introduction, V:185. This is also a central topic of §77; e.g. V:406.

transcendental, they are *metaphysical*.⁷³ Because our inquiries into nature must be guided by an idea of nature as materially unified is it that this mechanistic idea of nature is necessary. Now, it is because of this necessity that the concept of mechanism figures in the antinomy about organisms. Specifically, this concept figures in the maxim_{RPJ} stated by the thesis, a maxim that is grounded in the idea of nature as materially unified by means of mechanical principles.⁷⁴ Thus, the concept of mechanism's being necessary in this way vouchsafes the necessity of the antinomy:⁷⁵ It is because nature can only possibly be materially unified by means of mechanistic principles, while organisms do not fit into the mechanistic mould, that there is an antinomy about organisms.

Having all of this in view we can now turn to McLaughlin's dilemma. For, that the concept of mechanism enters the antinomy via the *idea* of nature provides the key to its solution. The question that formulated this dilemma was: "Can Mechanism be Necessary and Still be Merely Regulative?" My answer is that 'mechanism' is necessary yet regulative because it figures centrally in the material concept of nature, a concept that denotes the only way in which we can hope to thoroughly unify all of our experience. 'Mechanism' figures in that concept, because the principles that unify that concept of nature are mechanical. Yet, this concept is merely an idea and thus regulative. In this way mechanism can be necessary without being constitutive of experience.

IV. The Resolution of the Antinomy

At the end of the last section, I already touched upon what I take to be a crucial step in the resolution of the antinomy. This step consists in a clarification of the maxim_{RPJ} stated in the thesis and

⁷³ Cf. *CPJ*, Introduction, V:181.

⁷⁴ A maxim_{RPJ} is a regulative principle (Cf. *CPJ*, Preface, V:167-8; §70, V:387.10), and regulative principles must be grounded in an idea, as Kant says at B799/A771 (cf. also *CPJ*, §76, V:401.11-7).

⁷⁵ The antinomy about organisms is, however, only conditionally necessary; for it only occurs *given* the encounter of organisms, which Kant thinks is not necessary. Cf. *CPJ*, §70, V:386.31-4; §66, V:376.15-7; §74, V:396.7-9.

of the idea that grounds this maxim, the idea of mechanistic nature. My goal in this section is to give a comprehensive account of the resolution of the antinomy, an account that I seek to develop out of criticisms of how, according to the received view, the antinomy is resolved. My comprehensive account involves taking pertinent quotes into account from *CPJ* §§72-4, which are sections in which Kant expands the discussion of the antinomy so as to involve the specificity of organisms, the speciality of the concept of a natural purpose, and thus, I argue, the way in which the antinomy about organisms is a special antinomy. Once this expansion is made, the antinomy addresses both the misunderstanding that organisms are impossible because the material concept of nature is mechanistic as well as the misunderstanding that the existence of organisms proves that there must be a teleologically acting entity that underlies nature.⁷⁶ My criticisms of the received view can be divided into textual and systematic objections. My textual objections consist in pointing out that the received view cannot make sense of Kant's continuous repetition of the claim that the principle of mechanistic explanation and the principle of natural purposiveness are mere regulative principles, and in pointing out a quote from *CPJ* §72 that strongly speaks in favor of a confusion-reading and against a contradictory maxims-reading. My systematic objections are as follows. I argue that the central claim of the received view, that the maxims_{RPJ} are contradictory, betrays a commitment to Transcendental Realism. And then, I argue that the received view is wrong to take Kant's invocation of the limiting concept of an intuitive intellect to be central to the resolution of the antinomy. This is so because a mere limiting concept cannot carry that much "argumentative weight". My final criticism is both textual and systematic. It concerns the received view's neglect of *CPJ* §74, which, I argue, is crucial to how Kant conceives of the antinomy and its resolution. Kant's conception of the resolution centrally involves the speciality of the concept of a natural purpose and thus the speciality of the antinomy about organisms. Specifically,

⁷⁶ I do not separately address hylozoism, which Kant thinks does not make sense anyway. (Cf. *CPJ*, §73, V:395)

the antinomy comes about because we naturally assume the concept of natural purposiveness to be cognizable a priori, i.e., to be derivable from principles of reason. However, the concept of natural purposiveness *cannot* be deduced a priori, but rather has its objective reality *merely on an empirical basis*. A consequence of this argument is that the question “How is the generation of organisms possible?” can in principle not be asked, all the while the empirical reality of the concept of an organisms is given. Taking this conception into account allows for deeper insight into Kant’s thinking, I submit.

I begin with my textual objections to the received view.⁷⁷ The first problem I want to raise is that a contradictory maxims-reader has trouble explaining why Kant repeatedly mentions that mechanism and/or the teleology of organisms are maxims_{RPJ} and not principles_{DPJ}. On a contradictory maxims-reading, any mention of principles_{DPJ} would be a side-issue that warrants mentioning once, maybe twice, in order to clarify that the antinomy about organisms is an antinomy of the power of judgment rather than one of pure reason. Referring only to Kant’s mentioning of this point in §70, McLaughlin says that Kant’s presentation of the antinomy was really misleading.⁷⁸ It is no surprise that McLaughlin says this, because, on the contradictory maxims-reading, the actual antinomy has nothing to do with principles_{DPJ}, but only with maxims_{RPJ}, which a contradictory maxims reader takes to actually contradict each other. Yet, the contradictory maxims-reading does not sit well with many more choices that Kant made when writing the Critique of the Teleological Power of Judgment. For, in that part of the *CPJ*, Kant mentions the point that mechanism and/or the teleology of organisms is a principle of the regulative power of judgment and not of the determining power of judgment fifteen times (in addition to his twice mentioning that point in the Introduction), nine times of which occur in the Dialectic of

⁷⁷ I am here not engaging with the textual objections that are raised by the received view against a confusion-reading. I do not think that these objections hit their target. Marcel Quarfood has done valuable work on this issue (Cf. Quarfood 2004: 160-205). For example, the objection is raised against confusion-readings that the antinomy would only be an antinomy *specifically* of the power of judgment, if the maxims are contradictory. Yet, the specificity of the antinomy of the power of judgment can perfectly well consist in our mistaking regulative principles of the RPJ for constitutive principles.

⁷⁸ McLaughlin 1990: 158-9. In the original, German version of his book, McLaughlin expresses more clearly his thinking that Kant presents the antinomy in §70 in a *really* misleading fashion (McLaughlin 1989b: 143).

the Teleological Power of Judgment.⁷⁹ It would not make sense for Kant to mention this point so often were it not the case that the antinomy arises because we confuse maxims_{RPJ} with principles_{DPJ}.

In addition to this point, I want to draw attention to a pertinent passage from §72 that speaks clearly and strongly against the received view and in favor of a confusion-reading. In this quote, Kant talks about the shared assumption of the “four systems” he discusses in §§72-4, the “four systems” that I mentioned above on p.146 and which I will discuss more on pp.153-4.

If we now speak of the [four] systems for the explanation of nature with regard to final causes, one must note that they all controvert one another dogmatically, i.e., concerning objective principles of the possibility of things, whether through intentionally or even entirely unintentionally acting causes, but not concerning the subjective maxims for merely judging about the causes of such purposive products – in which case **disparate** principles could well be united with each other, unlike the former case, where **contradictorily opposed** principles cancel each other out and cannot subsist together.⁸⁰

The shared assumption of the four systems is that they all consider natural purposiveness to be a concept that could be treated *dogmatically*, i.e., as if it were an “objective principle of the possibility of things.” If this assumption is dropped, then the contradictory opposition between the principles vanishes, because disparate subjective maxims of the reflecting power of judgment “could well be united with each other.” To paraphrase, Kant says here that confusing regulative principles, which only address our judging about the causes of organisms, for constitutive ones about the *possibility* of things, is what brings about the conflict of the four systems. Once the confusion is overcome, the

⁷⁹ Kant mentions this point at: §61, V:360 & 361; §65, V:375; §67, V:379; §68, V:383; §70, V:387-8; §71, V:389; §72, V:391; §73, V:395; §74, V:396; §75, V:398; §77, V:405; §78, V:411 & 412; §82, V:429, and in the Introduction at V:194 & 197.

⁸⁰ *CPJ*, §72, V:391.

principles can co-exist unproblematically. That is, once the antinomy is overcome, the principles of mechanistic explanation and of teleological explanation can co-exist just like the regulative principles of homogeneity and specificity co-exist unproblematically; the latter being the principle to search for all species of a given genus, the former being the principle to search for a unifying genus of a set of given species.⁸¹ Thus, the cited passage speaks clearly and strongly against the received view and in favor of a confusion-reading.

After these textual issues, I now want to turn to systematic problems for the received view regarding the resolution of the antinomy. The first problem occurs regarding the central claim of the contradictory maxims-reading: that the maxims are, in fact, contradictory. While this issue is one that concerns the question what the antinomy consists in, it has implications for the resolution of the antinomy. We have just seen textual evidence that it is *not* Kant's view that the contradiction persists even when the mechanistic principle and the teleological principle regarding organisms are recognized to be maxims_{RPJ}. (This view sounds much more like Hegel's, one might add.) A crucial *systematic* reason against this claim is that, unbeknownst to its proponents, it is actually an expression of *Transcendental Realism*. This is so because mere maxims or guidelines for the creation of new concepts *cannot* stand in a contradictory relation to each other. To be sure, the maxims that figure in the antinomy are *disparate*—they are not the same maxim. We could also say that they are *opposed* to each other insofar as they guide us in very different directions, as it were. Yet, this does not amount to a *contradiction*. In order for a contradiction to occur, contradictory predicates have to be attributed to the same subject.⁸² But with respect to mere maxims, this is not the case. Only *empirical concepts* that were formed under the guidance of different maxims could stand in a contradictory relation to each other—when

⁸¹ Cf. Quarfood 2004: 168-9.

⁸² Cf. Michael Wolff's helpful discussion of Kant on contradiction (cf. B190/A151 and B530-3/A503-5) at Wolff 2017: 57-61.

attributed to the same subject. Thus, the actual claim of the contradictory maxims-readers must or should be that a mechanistic *explanation* and a teleological *explanation* of the working or generation of an organism would be contradictory predicates attributed to the same subject.⁸³ It is this claim, I think, that lies at the heart of the antinomy: our intuition that the creation of an organism must either be explained mechanistically or teleologically, *tertium non datur*.

But why would a mechanistic and a teleological explanation stand in a contradictory opposition to each other? Are such explanations in principle contradictory? Kant discusses this question in *CPJ* §78, the concluding section of the Dialectic of the Teleological Power of Judgment. There, Kant writes the following about the unification of the principle of mechanical and the principle of teleological *explanation*:

The two principles cannot be united in one and the same thing in nature as fundamental principles for the explanation (deduction) of one from the other, i.e., as dogmatic and constitutive principles of insight into nature for the determining power of judgment.⁸⁴

Kant says that the two principles of explanation would exclude each other were they taken to be principles from which the thing at hand—an organism—is supposed to be deduced. That is, were the two principles objective principles that state how things are, then the fact that they are disparate principles would amount to a contradiction between the two principles. But note how on this picture the “thing in nature” is taken to be derived or deduced from a higher principle.⁸⁵ Assuming that objects are dependent on higher, more objective principles from which they can be derived is, however, a

⁸³ On the basis of this argument, I disagree with statements of contradictory maxims-readers that *seeking* explanations of different kinds already amounts to a contradiction. (Cf., e.g., Watkins 2009: 203.)

⁸⁴ *CPJ*, §78, V:411.

⁸⁵ On such a view, a ‘thing in nature’ is taken to be nothing but the sum total of its deducible properties.

rationalistic view—and an expression of Transcendental Realism. Why this is so can come out easiest through the contrast to Transcendental Idealism. According to Transcendental Idealism, an object of perception has objective reality by itself; and an explanation by means of *higher principles* is only a demand we *seek* to realize, without ever being able to fully realize it. It is the perceived object, the appearance, that has objective reality, not the principle or idea from which the object with its properties is supposed to be derived.⁸⁶ The transcendental realist, on the contrary, thinks that explanations only work if the explanans has at least as much objective reality as the explanandum. For example, Descartes holds in the Third Meditation that God, as the ground of everything, must have at least as much objective reality as (the ideas) of everything He grounds. Whereas Kant famously rejects such reasoning and holds that the concept of God is an *idea*, in Kant's sense of the term. Regarding our current topic, the transcendental *idealist* thus holds: only if we misunderstand the two principles of explanation—the mechanical and the teleological principle—as being objective principles, principles that award their object with objective reality, as it were, do they *contradict* each other.

Put differently, by invoking ideas: maxims_{RPJ} do not contradict each other, because the ideas that ground them do not have objective reality in a direct and determinate way, but are mere ideas. Only if we subscribe to Transcendental Realism and take these ideas to be concepts with direct and determinate objective reality is there a conflict. Thus, once Transcendental Idealism is adopted and we recognize the two principles to be mere maxims for concept formation, then it is perfectly possible to consider the two principles to co-exist. On the basis of the two maxims, we form new concepts, concepts that can figure in explanations. The explananda of such explanations can then be taken to relate to each other like means to end and like matter to form, as Kant writes in §78.⁸⁷ In this way, the

⁸⁶ Cf. B517/A489.

⁸⁷ *CPJ*, §78, V:414.

two maxims are perfectly compatible with each other. We could summarize: as global principles, the maxims lack the objective reality in order to be able to contradict each other; and *locally*, as it were, explanations formed on the basis of both maxims are perfectly compatible—contrary to our initial intuition.

Thus it is an expression of Transcendental Realism to consider the maxims_{RPJ} to be contradictory. McLaughlin and Allison would of course never wittingly endorse Transcendental Realism. Yet, their commitment to the claim that the maxims_{RPJ} are in fact contradictory betrays, I submit, that they did not succeed in excising their minds from Transcendental Realism.

Clarification of the concept of the reflecting power of judgment, its maxims, and of the ideas that ground these maxims is thus what makes us overcome the antinomy. According to the received view, this is not what makes us overcome the antinomy, but rather the invocation of the concept of the intuitive intellect. My second systematic objection, which we already touched upon in section II, is that this cannot be right. For, the concept of an intuitive intellect is a mere limiting concept. As Allison himself points out, it is “parasitic”⁸⁸ on the concept of *our* intellect. Thus, I submit, it is too indeterminate to be able to do any “heavy lifting” with respect to the resolution of the antinomy. McLaughlin does not give a lot of detail about *how exactly* the invocation of the intuitive intellect brings about the resolution of the antinomy. Somehow the invocation of the intuitive intellect makes us recognize that we do not have to explain everything, McLaughlin holds.⁸⁹ But how exactly? Because the intuitive intellect sees how things really are, whereas we do not? This is no viable position, because such determinate a claim could not be made about a limiting concept.⁹⁰ Allison gives more detail about

⁸⁸ Allison 1992: 36.

⁸⁹ Cf. McLaughlin 1990: 162.

⁹⁰ The same point can be brought out differently by asking: How do we know that the intuitive intellect sees things correctly whereas we do not? This question brings out that we cannot know that. Hence, the claim falls to the ground that the intuitive intellect sees how things really are whereas we do not.

how exactly the resolution is supposed to come about: the invocation of the intuitive intellect deprives the maxims_{RPJ} of their “ontological commitment”.⁹¹ But how exactly is this supposed to work? I think Allison is completely right that the “ontological commitment”—or, in more Kantian terms: the objective reality—that we attribute to the ideas that ground the maxims is the unjustified assumption that underlies the antinomy. Yet, this unjustified assumption is exposed by reflection on what a maxim_{RPJ} is, not by the invocation of a limiting concept. To be sure, the invocation of the limiting concept of an intuitive intellect may be *helpful* for getting into view what a maxim_{RPJ} is. But it does not make sense to hold that there are maxims_{RPJ} that are maxims_{RPJ} alright, yet that happen to have an ontological commitment attached to them, and where then the invocation of the intuitive intellect deprives these maxims_{RPJ}, and *only* these maxims, of this ontological commitment. Thus, the invocation of the limiting concept of the intuitive intellect—or of the limiting concept of a supersensible ground of nature—cannot be the crucial step in resolving the antinomy. The sections in which Kant discusses these limiting concepts, §§77-8, are rather to be seen as a coda to Kant’s discussion of the antinomy about organisms, a coda in which Kant shows that the concept of natural purposiveness is germane to our discursive intellect and that we have to create the limiting concept of a supersensible ground of nature so as to be able to *think* the unification of mechanism and teleology *in one principle*, a unification that is merely logically and not really possible.

My final objection concerns a section of the *CPJ* that is largely neglected by the received view, §74. In this section, I submit, Kant states a diagnosis that specifies, for the case of the antinomy about organisms, the general diagnosis that antinomies arise because of our natural tendency to conceive of ideas as having objective reality in a direct and determinate way. This specific diagnosis is that the “four systems” discussed in *CPJ* §§72-3—which include positions such as theism and a

⁹¹ Allison 1992: 36. Cf. section II above.

straightforward, reductive naturalism that Kant attributes to Epicurus and Democritus—presuppose that the concept of a natural purpose is cognizable a priori, whereas this is actually not the case. Contrary to the received view, also in the case of this more specific diagnosis is the antinomy not overcome by the invocation of a limiting concept, but by our coming to recognize that we fell into the antinomy about organisms because we took the concept of a natural purpose to be cognizable a priori and thus assumed that we could settle a priori whether this concept has objective reality or not. Furthermore, my account of *CPJ* §74 sheds light onto why Kant writes several of the things that he writes in the Dialectic of the Teleological Power of Judgment, such as the passage from §72 quoted above on p.148, and thus on the overall structure of that chapter of the *CPJ*.

The “four systems” discussed in *CPJ* §§72-4 fall into two camps: realism and idealism about natural purposiveness.⁹² Yet, both camps assume that the concept of natural purposiveness is cognizable a priori and, thus, take it to be a concept whose objective reality must be *provable* a priori. The realist about natural purposiveness takes such an a priori proof to exist, whereas the idealist denies that and concludes that the concept of a natural purpose has no objective reality. Kant also expresses this point by saying that the shared assumption of all these systems is to take the concept of natural purposiveness to be capable of *dogmatic use*, i.e., to assume that this concept could be determined a priori by considering it as contained in a principle of reason and that *thereby* determining judgments about objects could be made.⁹³ The only way in which a dogmatic use is possible consists in recourse to the two kinds of causality we can cognize transcendently: efficient and final causation—as Kant discusses in the first two paragraphs of §65.⁹⁴ For, I would add, only these two kinds of causality are

⁹² Cf. *CPJ*, §72, V:391.

⁹³ Cf. *CPJ*, §74, V:395. In this passage, Kant makes the important point that the principles employed in the dogmatic use are principles of reason. Cf. also: *CPJ*, §72, V:391.7-15.

⁹⁴ It is due to their transcendental cognizability, I think, that these two concepts of causality are “determinate”; whereas the determination of the form of organisms stated in §64 “is a somewhat improper and indeterminate expression, in need of a derivation from a determinate concept.” (*CPJ*, §65, V:372.14-8.) At *CPrR*, V:54-5, Kant says that only efficient and final causality have objective reality, because only for them is a transcendental deduction possible.

grounded in the unity of consciousness—in the unity of consciousness with respect to theoretical and with respect to practical reason, respectively. This distinction between two kinds of transcendently cognizable causality yields the two camps into which the four systems are divided: idealism and realism about natural purposiveness.

Yet, the concept of an object as a natural purpose is *not* capable of dogmatic use. Kant expresses this in the following quote.

[1] The concept of a thing as a natural end ... is *certainly* an *empirically conditioned concept*, i.e., one that is possible only under certain conditions given in experience, but it is still not a concept that can be *abstracted* from experience, but one that is possible only *by drawing on a principle of reason* in the judging of the object. [2] With respect to its objective reality, this concept thus cannot be understood and dogmatically established at all *as such a principle* (i.e., that an object is possible in accordance with *it*) ... [3] Thus it cannot be treated dogmatically for the determining power of judgment, i.e., not merely can it not be determined whether or not things of nature, considered as natural ends, require for their generation a causality of an entirely special kind (that in accordance with intentions), but this question cannot even be raised, because the objective reality of the concept of a natural end is not *demonstrable* by means of reason at all (i.e., it is not constitutive for the determining, but is merely regulative for the reflecting power of judgment).⁹⁵

This complicated quote needs spelling out. The main point of the quote is that for the concept of a thing as a natural end/purpose to be capable of dogmatic use, this concept would have to be a principle of reason or derivable from one, so that an object *is possible* in accordance with it. The objects that would then be possible in accordance with such a principle are organisms. Yet, as the first sentence

⁹⁵ *CPJ*, §74, V:395; translation amended, italics and sentence numeration are mine.

states, the concept of natural purposiveness is *empirically conditioned*. Kant said as much about the principle of purposiveness in organisms already in *CPJ* §66:

As for what occasions it, this principle is of course to be derived from experience, that is, experience of the kind that is methodically undertaken and is called observation...⁹⁶

But Kant hastens to point out in sentence [1] that the concept of a thing as a natural purpose is not *abstracted* from experience, as ordinary empirical concepts are. Rather, as Kant has said before in §74, in §70, and in §65,⁹⁷ the faculty of reason is drawn in in order to form the concept of a natural purpose. For, the concept of purposiveness has its “transcendental home” in practical reason, in the intentional purposiveness of agency. This is what makes the concept of a thing as a natural purpose occupy its uneasy position in between theoretical reason (qua object of nature) and practical reason (qua purposive), belonging to both and neither. Despite reason being drawn in so as to form the concept of a natural purpose, this concept is only formed due to the empirical encounter of organisms.⁹⁸ Hence, the concept of a thing as a natural purpose, i.e. the concept of an organism, *cannot be derived a priori*. Furthermore, the concept of an organism can thus not figure as a principle of reason that accounts for the possibility of objects.⁹⁹ This is the point of sentence [2]. That is, the concept of an organism is not necessary in order to have cognition of objects at all. This is why no dogmatic use is possible of that concept—whereas assuming that such a use is possible is the shared presupposition of the four systems. Therefore, as sentence [3] says, the *metaphysical* question about the possibility of organisms

⁹⁶ *CPJ*, §66, V:376.

⁹⁷ *CPJ*, §74, V:396.1-4; §70, V:386.31-4; §65, V:374.27-375.25.

⁹⁸ Cf. *CPJ*, §70, V:386.31-4.

⁹⁹ Kant holds that if I assert that organisms are *possible* by means of a concept, then I have to demonstrate the objective reality of that concept. (Cf. *CPJ*, §75, V:397.31-398.5; §73, V:394.18-25.)

cannot even be asked.¹⁰⁰ For, the concept of an organism is essentially empirical. Thus, “the objective reality of the concept of a natural end is not *demonstrable* by means of reason at all.” The attempts of the realistic and idealistic camp to prove or disprove the objective reality of natural purposiveness thus fall to the ground. The only thing we can do is to pursue empirical inquiries into the mechanical *and* teleological causes of specific organisms.¹⁰¹

In sum, the antinomy about organisms specifically arises when we ask how the concept of a natural purpose is possible.¹⁰² This is reflected in the antinomy’s consisting of statements about the *possibility* of the generation of things. When we ask that question, we relate the concept of an organism to the principles of reason, to our idea of nature as materially unified and to the idea of freedom, which involves the concept of intentional purposiveness. We then assume that the concept of a natural purpose is capable of dogmatic use, which includes the assumption that we could determine a priori whether that concept has objective reality or not. In general, antinomies rest on a natural misunderstanding about the status of our ideas, a misunderstanding that consists in confusing ideas with concepts that directly and determinately have objective reality. The natural view that the creation of an organism must either be explained mechanistically or teleologically flows from such a confusion. Once maxims are recognized as maxims and ideas are recognized as ideas, we come to see that *locally* mechanical and teleological explanations can co-exist. I argued that the received view went wrong in rejecting such a reading and in holding instead that the antinomy is resolved by invoking limiting concepts. The received view furthermore misses Kant’s discussion of the distinctive character of the

¹⁰⁰ It being *metaphysical* judgments that §74 claims we cannot make is further warranted by the fact that Kant’s examples for judgments we cannot make, at V:397.9-10, are metaphysical judgments.

¹⁰¹ At *CPJ*, §68, V:382-3, Kant says that this is what physics is doing. N.b.: Kant has a broad conception of physics that includes what we call biology. (Cf. *CPJ*, §68, V:382; *On the Use of Teleological Principles in Philosophy*, VIII:179.)

¹⁰² This interpretation is in line with Kant’s claim at B316-7/A260-1 that in a *transcendental reflection*, we trace concepts to their source of knowledge. The interpretation is furthermore in line with Kant’s statements at *On the Use of Teleological Principles in Philosophy*, VIII:160 about the endeavor of metaphysics. In *metaphysics*, Kant holds, we demand—correctly—that the right of theoretical-speculative reason to do science be justified and that reason’s pretension to decide anything be justified. In order for this to happen, Kant says, reason has to uncover the state of its faculties or powers completely.

Antinomy of the Power of Judgment in *CPJ* §74, which adds to the general character of antinomies that the antinomy about organisms comes about due to the empirical encounter of organisms, and that its resolution involves the proof that the concept of an organism is *essentially empirical*. This concept thus has a special status in Kant's system, insofar as this concept is essentially empirical without being transcendently grounded; in contrast to, e.g., empirical theoretical concepts, which are transcendently grounded in the Categories and the unity of consciousness of theoretical reason.

V. The Resulting Picture: Is There Purposiveness in Nature?

If my argumentation in this chapter is convincing and the received view is left behind in favor of a strongly revised confusion-reading along the lines I suggest, we are still presented with a far-ranging question regarding the status of organisms and our knowledge of them. When the status of our concept of nature as an idea is properly taken into account, the following issue arises about the epistemic status of organisms: are teleological judgments and explanations as done in biology *objective* or do they merely *guide* our research so that we can make objective judgments and give objective explanations, which can only be mechanical? That is, can empirical judgments such as “The heart pumps blood so as to supply the other organs with blood” or “Insects are appropriate food for hedgehogs” be objective or are they just pointing us towards future research? Put differently, are what we take to be organisms genuine cases of purposiveness *in nature* or is the natural purposiveness of organisms not really in nature? The interpretation laid out in this chapter is likely to be perceived as incomplete if this question is not addressed as well.

This question is a difficult one, as Kant seems to provide ample evidence for both readings. In this section, I begin by laying out the latter view, which can be called “mere guidance-view”, and I present three exemplary passages from Kant that speak in favor of it. Then, I present passages that speak against this view and in favor of the former view, which I call “nature as mere idea-view”, and

I show how a careful reading allows for a unified account of all passages by means of the former view. This issue is also relevant in relation to the received view, for it seems plausible that the unattractiveness of a mere guidance-view drove scholars towards a contradictory maxims-reading. That is, the mere guidance-view, which resolves the antinomy by denying that there is any purposiveness *in nature*, was correctly seen by McLaughlin and his followers as unsatisfying; this may have made them endorse a contradictory maxims-reading, despite the problems of it.

According to the mere guidance-view, the sole role of the concept of a natural purpose consists in guiding our empirical inquiries when we are investigating organisms. Teleological concepts may be needed in order to *identify* organisms, but legitimate knowledge claims will only involve mechanical predicates. For example, a judgment like “On average, hedgehogs weigh 1.7 lbs.” can, on that view, be knowledge; whereas a judgment like “Insects are appropriate food for hedgehogs” cannot, due to the purposiveness involved in the concept “appropriate”. Judgments like the latter only have the function to guide our empirical inquiry so as to find out more about organisms by means of judgments of the first sort. Passages that seem to speak in favor of that view are, for example, the following three ones.

1) ...teleological judging is rightly drawn into our research into nature, at least problematically, but only in order to bring it under principles of observation and research in **analogy** with causality according to ends, without presuming thereby to **explain** it. It thus belongs to the reflecting, not to the determining power of judgment.¹⁰³

2) ...to represent nature as technical, like a power of reason [gleich einer Vernunft] (and so to attribute purposiveness and even ends **to nature**), is a special concept, which

¹⁰³ *CPJ*, §61, V:360.

we cannot encounter in experience and which only the power of judgment introduces into its reflection on objects...¹⁰⁴

3) Now it is clear that in ... cases [of natural ends] the concept of an objective purposiveness of nature serves only **for the sake of reflection** on the object, not for the **determination** of the object through the concept of an end, and the teleological judgment on the inner possibility of a natural product is a merely reflecting, not a determining judgment.¹⁰⁵

These quotes seem to say that the concept of natural purposiveness cannot be used by the determining power of judgment, but only by the reflecting power of judgment. That is, these quotes seem to say that biological concepts can only ever be used in order to reflect on objects, not in order to determine them.

There are, however, also passages that speak against such a reading, passages that speak in favor of our being able to experience organisms, to explain them teleologically, and to have knowledge of them. While quote 1) seems to say that biological concepts only have problematic status, at a later point in the *CPJ* Kant speaks of organisms as “things whose concept as natural ends is indubitably established [unbezweifelt gegründet].”¹⁰⁶ He furthermore says, in §65, that the existence of organisms provides the concept of a natural end with objective reality:

Organized beings are thus the only ones in nature which ... must ... be thought of as possible only as its [nature's] ends, and which thus first provide objective reality for the concept of an **end** that is not a practical end but an end of **nature**, and thereby provide

¹⁰⁴ *FI*, XX:235.

¹⁰⁵ *FI*, XX:236.

¹⁰⁶ *CPJ*, §80, V:418.12-3.

natural science with the basis for a teleology, i.e., a way of judging its objects in accordance with a particular principle the likes of which one would otherwise be absolutely unjustified in introducing at all (since one cannot at all understand the possibility of such a kind of causality *a priori*).¹⁰⁷

Then, in §68, Kant states that organisms are created according to *known laws of experience*,¹⁰⁸ that there are “empirical laws of natural ends in organized beings,”¹⁰⁹ and that, because there are such laws...

...it is not merely permissible but is even unavoidable to use the teleological **way of judging** as the principle of the theory of nature with regard to a special class of its objects.¹¹⁰

The context of this passage makes clear that the teleological way of judging is thus to be considered as an “inner principle” of natural science. The text continues with the following two sentences.

Now in order to remain strictly within its own boundaries, [natural science] abstracts entirely from the question of whether the ends of nature are **intentional** or **unintentional**; for that would be meddling in someone else’s business (namely, in that of metaphysics). It is enough that there are objects that are **explicable** only in accordance with natural laws that we can think only under the idea of ends as a principle, and which even can be **known** [erkennbare] internally, as far as their internal form is concerned, only in this way.¹¹¹

¹⁰⁷ *CPJ*, §65, V:375-6.

¹⁰⁸ *CPJ*, §68, V:382.7-11.

¹⁰⁹ *CPJ*, §68, V:382.31.

¹¹⁰ *CPJ*, §68, V:382.30-4.

¹¹¹ *CPJ*, §68, V:382-3; translation amended.

What is striking about this quote is that Kant says that there are indeed organisms, that they are explicable by means of natural laws, that these natural laws are teleological in character, and that organisms can be known internally by means of such laws (and only in that way).¹¹² Thus, this second set of quotes contains the claims that we do in fact have empirical knowledge of organisms, that we do in fact know laws of experience according to which organisms are created, that the teleological way of judging is an inner principle of natural science, and that we do in fact *explain* organisms by means of teleological laws of nature.¹¹³

How are these claims compatible with the rest of Kant's system, especially his mechanistic account of nature? And how are they compatible with the three quotes that seem to speak in favor of a mere guidance-reading of biological concepts? As discussed above in section III, I think that these claims are compatible with Kant's account of mechanistic nature, because the concept of mechanistic nature is merely an idea. This idea orients us in our empirical inquiries, but does not rule out experience that does not accord with it. It is our experience that has objective reality by itself, not the idea. Put differently, while the material concept of nature does not allow for purposiveness, the formal concept of nature does.

But what can be said about the passages that seem to speak in favor of a mere guidance-reading? I want to begin with quote 3). This quote contains the claim that "the concept of an objective purposiveness of nature serves only **for the sake of reflection** on the object, not for the **determination** of the object through the concept of an end." Yet, and quote 1) implies as much, explanation happens by means of determination. Quote 3) and Kant's claims that we explain organisms teleologically thus seem to contradict each other. This contradiction can be resolved by

¹¹² Also at *CPJ*, §67, V:378.17 does Kant say that we do indeed have teleological knowledge (Erkenntnis) of nature.

¹¹³ It is thus not correct when McFarland says that "teleology does not form a proper part of theoretical natural science but is regarded as an introduction, or transition, to theology. It is kept out of natural science." (McFarland 1970: 116.)

taking the context of quote 3) into account. For, as the sentences following quote 3) make clear, quote 3) is only denying that we can determine nature by means of the concept of *intentional* purposiveness.¹¹⁴ There are more passages like this one, passages that seem to deny teleological knowledge of organisms, but are actually only denying that it is intentional purposiveness that we can attribute to (objects in) nature.¹¹⁵

A similar point can be made about quote 2). The power of reason acts intentionally; thus, representing nature like the power of reason means to ascribe intentions to nature. That (something in) nature is intentional is nothing we can encounter in experience—save in the case of human beings.¹¹⁶ Thus, the experience of organisms is not excluded, whereby coherence with the passages is established in which Kant says as much.

This leads to the question how experience of organisms works. I take it that the experience of organisms works in the following way. The concept of a thing as a natural purpose involves that we treat organisms *as if* the purposiveness were intentional, while abstracting completely from the question whether natural purposiveness is or is not intentional. Once the concept of an organism is formed in this fashion, we can determine this concept using the determining power of judgment.

While there are many passages like quote 2) and quote 3) where Kant seems to deny that the concept of natural purposiveness can figure in determining judgments, careful reading of these passages and taking their context into account has, in my experience, always yielded that it is not the determination of the concept of an organism that Kant denies, but rather the determination of the concept of intentional purposiveness *or* the determination of the idea of mechanistic nature via

¹¹⁴ This sentence reads: “No cause acting in accordance with the representation of purposes, i.e., no **intentionally** acting cause, is thereby attributed to nature, which would be a determining teleological judgment and as such transcendent, since it would suggest a causality that lies beyond the bounds of nature.” (*FI*, XX:236.)

¹¹⁵ E.g., *CPJ*, §74, V:396-7 or §77, V:405. The reason for the existence of such passages is, I submit, that the concept of purposiveness is transcendently grounded in practical reason and thus in intentional action.

¹¹⁶ For Kant’s claim that human agency is a case of the application of the category of cause and effect, which renders it a case of something we can experience, cf. *Progress*, XX:280.

judgments about organisms. A further reason in favor of this reading is that Kant's discussion of the four systems in §§72-4 treats of *metaphysical* judgments that involve ascribing or denying intentionality to organisms, and not of teleological judgments as done in biology. In sum, to read Kant in the way I propose allows for coherence with passages like those quoted above where Kant asserts that organisms are explained teleologically.

This leaves quote 1) and the claim contained in it that “teleological judging is rightly drawn into our research into nature ... without presuming thereby to **explain** it.” While this passage seems to straightforwardly contradict the passages where Kant talks affirmatively of teleological explanations in biology, there is a way to harmonize quote 1) with these passages. This harmonization is possible by first paying attention to the section in which Kant writes quote 1). It is section §61, the introductory section to the whole Critique of the Teleological Power of Judgment. It is thus not implausible to assume that later passages might qualify said claim in quote 1)—without contradicting it. And this is exactly the case if we take the concluding section of the antinomy about organisms into account, §78. In that section, Kant states how, once the antinomy is overcome, mechanical and teleological explanations can co-exist in organisms—locally, as I would put it. Kant begins §78 by laying out how we cannot do away with *either* form of explanation; he says that specifically without mechanical explanations nature could not be explained at all. Yet, as discussed in section IV, at V:414 Kant says that we can take what mechanical explanations describe to be the *means* to the *end* described by teleological explanations, or as the *matter* to the *form* described by teleological explanations. Thus, what Kant is actually saying is, I submit, that teleological explanations *by themselves* do not explain. This is what he says in §61. Yet, *in unity* with mechanistic explanations, teleological explanations can and do explain. Read in this way, Kant's transcendental account of how we form and use the concept of an organism is coherent and it does neither exclude biology from natural science nor the teleological explanations that are given in biology.

To conclude, there are many passages that seem to speak in favor of the mere guidance-reading of biological concepts. Yet, careful reading of these passages and including other passages—passages that state the objective reality of the concept of a natural purpose and the actuality of biology including teleological explanations and teleological laws of nature—suggest a different reading. This different reading, which I call “nature as mere idea-reading”, allows for reading Kant as salvaging rather than revising the everyday belief that plants and animals are part of nature. One of Kant’s goals in his critique of natural purposiveness is to be perfectly clear that the existence of organisms does not allow for an inference to the existence of God. Kant’s discussion of this point and connected topics can at times sound as if he throws out organisms altogether; I have argued that this is not the case. Finally, should there be some truth to my speculation that it is the unattractiveness of the mere guidance-view that drove interpreters into the arms of the contradictory maxims-reading, then I have equally argued that this dichotomy is a false one.

Conclusion

Why do organisms give rise to an antinomy? It was my contention in this chapter that Kant’s account of organisms can be clarified by putting this question center stage. My answer is the following. First of all, the antinomy arises if we pay attention to the peculiar structure of organisms, natural purposiveness, and wonder how organisms are possible given a mechanistic conception of nature. Once we do that, the antinomy arises *necessarily*, giving rise to “a natural dialectic and an unavoidable illusion.”¹¹⁷ The received view cannot make sense of this necessity, because it has no satisfying account of Kant’s usage of mechanism. I argued that we can make sense of Kant’s usage of ‘mechanism’ by relating it to a concept of nature where everything in nature hangs together by means of contentful

¹¹⁷ *CPJ*, §70, V:386.

laws. These contentful laws are the laws or principles laid out in the *Metaphysical Foundations of Natural Science*, principles that can be called “mechanical”. Second, the antinomy arises because of our natural tendency to mistake ideas for concepts with direct and determinate objective reality. What the received view has missed is that this tendency is at work in the antinomy insofar as we have the natural tendency to award both our concept of nature as materially unified (by means of mechanistic principles) with direct and determinate objective reality as well as the idea of intentional, natural purposiveness that grounds our maxim to form biological concepts. Pointing out and overcoming this tendency in both cases is the crucial step in the resolution of the antinomy. The received view misses this and is thus caught up in McLaughlin’s dilemma. Recognizing and overcoming said tendency is what does the “heavy lifting” in the resolution of the antinomy, not the limiting concept of an intuitive intellect. I furthermore argued that the received view betrays a surreptitious commitment to Transcendental Realism by awarding the ideas that ground the maxims of the reflecting power of judgment with direct and determinate objective reality. Whereas in fact these maxims are not capable of standing in a contradictory relation to each other. Third, there is an antinomy *specifically* about organisms, because we naturally misunderstand the concept of natural purposiveness. Within Kant’s thinking, the concept of a natural purpose has objective reality, but cannot be cognized a priori. From this it follows that the question “How is the generation of organisms possible?” cannot even be asked. Thus, this question can neither be used to deny the objective reality of natural purposiveness nor to infer the existence of God as the intentional cause of organisms. Lastly, while I sought to rehabilitate a “confusion-reading” of the antinomy about organisms, I argued against the old way of spelling out such a reading regarding the status of the concept of a natural purpose. A confusion-reading need not be spelled out in terms of a “mere guidance-reading” of natural purpose-concepts, but is actually better spelled out in terms of a “nature as mere idea-reading”. In sum, I believe that this answer to the question why organisms

give rise to an antinomy sheds light onto central parts of Kant's distinctive position, Transcendental Idealism, which were so far not sufficiently understood.

Chapter 4

The Dialectics of Mechanism:

Hegel's Transformation of Kant's Transcendental Philosophy of Nature in the Mechanism-

Chapter of the *Science of Logic*

'No Idea is so generally recognized as indeterminate, ambiguous, and open to the greatest misconceptions, to which therefore it actually falls prey, as the Idea of freedom'.

– Hegel¹

Introduction

In the first three chapters, I have discussed how Kant argues for the necessity of causation, how Kant's position makes him a determinist while rejecting predeterminism, and how his position involves that the concept of nature as a mechanistic system and the concept of nature as a teleological system are mere ideas. The latter point allows Kant to make sense of biological laws and our experience of organisms within his transcendental philosophy all the while affirming that the form of organisms, natural purposiveness, is *not* necessary in the way that the form of theoretical or practical knowledge is. In this chapter, I seek to show how Hegel's conception of mechanistic nature is in important respects indebted to Kant, yet also different in significant ways. In order to bring these similarities and differences out, I give a detailed account of the Mechanism chapter in Hegel's *Science of Logic*. A central

¹ *EIII*: §482R, 215/301. Abbreviations used:

EI = *Encyclopedia of the Philosophical Sciences in Basic Outline – Part I: Science of Logic* (Hegel 2010a/Hegel 1986 vol. 8)

EII = *Encyclopaedia II: Philosophy of Nature* (Hegel 1970/Hegel 1986 vol. 9)

EIII = *Encyclopaedia III: Philosophy of Spirit* (Hegel 2007/Hegel 1986 vol. 10)

LHPbIII = *Lectures on the History of Philosophy III* (Hegel 1986 vol. 20)

PbR = *Philosophy of Right* (Hegel 1991/Hegel 1986 vol. 7)

SL = *Science of Logic* (Hegel 2010b/Hegel 1986 vols. 5 & 6)

part of my argumentation consists in my showing how Hegel takes Kant's argumentation in the Third Antinomy and gives it a form that does not rely on the way in which experience is possible. This involves that Hegel's transformation of Kant's argument makes no recourse to the character of space and time. Then, I lay out in detail how Hegel's method in the Mechanism chapter of the *SL* works. A crucial difference to Kant's method consists in the "productivity" of Hegel's "dialectical method": while Kant's discussion of the Antinomies of Reason primarily serves the function to identify and overcome the underlying assumption of the antinomial conflict, Transcendental Realism, Hegel takes the contradiction that his rendition of Kant's Third Antinomy yields to give rise to a new, richer form of mechanistic interaction. A detailed account of Hegel's method in the Mechanism chapter is helpful because it can figure as a concrete example of how Hegel's dialectical method works in the *SL* and in Hegel's system more generally. Finally, I discuss how Hegel—by means of his method—arrives at a rich conception of mechanism that he calls "Absolute Mechanism" and that is paradigmatically instantiated by solar systems. Absolute Mechanism is interesting because it is a form of mechanism in which the paradigmatic form of mechanistic interaction—external causation as it is present in the "billiard balls" model—is not the dominant form of determination or explanation. That is, solar systems are a concrete example of a mechanistic phenomenon that cannot be sufficiently grasped within a mindset that takes external causation to be the dominant form of determination or explanation. Rather, solar systems are primarily to be understood without recourse to factors external to it. Thus, solar systems give us a positive understanding of how things can happen in nature that are not primarily to be understood in terms of external causation—which is the form of determination that a pre-determinist takes to be dominant whenever natural phenomena are involved.

This chapter is structured as follows. In section I, I state an abbreviated account of Kant's argument that free will is not excluded, the argument that was the topic of chapter 2. Central to this account is to distinguish between determinism and predeterminism, where only the latter is in conflict

with human freedom. On my reading, Kant argues, in the Third Antinomy of Reason, that predeterminism entails a contradiction and that this is why freedom is not excluded even though determinism holds for every actual event. This then serves as a launching pad for the question how Hegel goes beyond Kant, a question that takes up the bigger part of this chapter. Hegel goes beyond Kant insofar as Kant only shows that predeterminism is wrong, but not *how* freedom is realized in nature. In current Hegel-scholarship, it is popular to address this issue by appealing to Hegel's account of life. For all its merits, this approach has the shortcoming of not addressing the issue of predeterminism. This leaves wanting a comprehension of how life can be realized in an at bottom deterministic nature. I suggest that such a comprehension can come about by turning towards Hegel's account of mechanism in his *Science of Logic*. This account deals with the basic concepts of a mechanical view of nature. In section II, I lay out how, according to Hegel, *solar systems* are mechanistic phenomena that do not fit the mould of predeterminism. This is so because predeterminism rests on the assumption that everything is determined by external causes, whereas no appeal to causes external to the solar system is necessary in order to determine location and motion of the planets once a solar system is in place. Hegel expresses this point with the at first bewildering claim that solar systems embody freedom. The sense of bewilderment can be alleviated by pointing out that Hegel understands freedom to come in degrees and that solar systems embody freedom only in a most rudimentary way, which lacks many aspects of full-blown freedom such as self-determination, mindedness, and recognition. Hegel's point that solar systems are not primarily to be explained by external causation, however, rests on the reader finding this argument intuitively plausible. This may not be enough to convince a person who believes in predeterminism. I hence discuss, in section III, how Hegel seeks to give not only an intuitively plausible but a systematically rigorous argument for the freedom of solar systems. This argument involves his scrutinizing the basic concepts in play in a mechanical account of nature, such as it underlies predeterminism. I lay out how this scrutinizing consists in exposing

presuppositions and problems of the account at hand, and how this gives rise to an improved account, which constitutes a next thought or stage in the argument. Furthermore, I show how Hegel takes up the core of Kant’s negative argument in a “purified form” and uses it for his dialectical progression from one stage to the next. It is through this progression that Hegel arrives at his account of the freedom of solar systems, which is thereby developed out of the more rudimentary account of mechanical nature that underlies predeterminism. After a brief comparison of Kant’s and Hegel’s method, I conclude with a discussion of how my account of freedom’s reality in solar systems supplements an influential account of practical freedom in Hegel and provides comprehension of how such freedom is possible.

I. Kant’s Negative Argument

In this section, I lay out how I think Kant’s argument in the Third Antinomy—his argument for why determinism does not exclude freedom—is most fruitfully construed.

Given the current debate in Hegel scholarship over “metaphysical” vs. “nonmetaphysical” readings of Hegel’s idealism,² it is necessary for me to address worries that some readers may have regarding my invoking Kant in order to illuminate some aspects of Hegel’s thinking. In short, I believe that the debate over “metaphysical” vs. “nonmetaphysical” readings is based on presupposing an opposition between mind and world, between thinking and reality. If a nonmetaphysical reading is understood as addressing thinking *rather than* reality, then I agree that it is objectionable. Yet, Hegel of all thinkers would say that opting for one side of such a dualism in order to avoid what is objectionable in the other side does not constitute progress. However, typical targets of this objection such as Pippin or McDowell need not be read as endorsing a nonmetaphysical reading that is predicated on such a

² Cf., e.g., Stone 2005 ch.1; Kreines 2006; Stern 2008; Bowman 2013: 1-7, ch.3; Wolf 2018.

dualism. I furthermore think that it would constitute a serious misunderstanding to read them in such a way.³ When understood properly, investigations into the fundamental forms of thinking are investigations into reality.⁴ For, only when we err in empirical cognition is there a disconnect between mind and world.^{5 6}

Kant can be understood in a similar way—pace Hegel’s mixed reaction of sometimes praising Kant highly⁷ and sometimes reading him uncharitably.⁸ While Kant is traditionally understood as a proponent of a dualism between our mind and how things really are,⁹ such a reading is not obligatory. On such a reading, the notion of a “thing in itself” is a philosophical given, i.e., an unclarified

³ It is a central theme of Pippin 2018 to clarify that he does not endorse a nonmetaphysical reading in such objectionable a way. (Cf., e.g., 32n54.) McDowell’s diagnosis, which I came to find correct, is that we are beset by the dualism between thinking and reality because we adopt a problematic account of experience. (Cf. McDowell 1996: xi, 9, 23.)

⁴ Christian Martin thus rightly points out that the *Science of Logic* presupposes nothing, also no conception of the relation between thinking and reality. (2012: 29) Rather, we have to become aware and rid ourselves of any such preconceptions. To use the terms ‘isomorphism’ or ‘homomorphism’ (cf., e.g., Bowman 2013: 18, 37, 54; Rand 2017: 394; Wolf 2018: 334) in this context is, I think, an expression of such a preconception. For, mind and world are then conceived of as two distinct structures that happen to stand in a relation of isomorphy or homomorphy to each other.

⁵ To someone who does not already agree, such a dogmatic statement can of course at best serve as pointing in a direction where the solution may lie. Unfortunately, this vexed and deeply rooted issue cannot be overcome easily, I think. Kern 2017 and James Conant’s work on scepticism (Conant 2004), perspectivism (Conant 2005 & 2006), and “logical aliens” (Miguens 2020) are, in my estimate, helpful to tackle the issue.

⁶ Error in non-empirical cognition such as mathematical or philosophical cognition is not happily described as the mind not being in touch with the world, I think.

⁷ ‘It is one of the profoundest and truest insights to be found in the Critique of Reason that the *unity* which constitutes the *essence of the concept* is recognized as the *original synthetic unity of apperception*, the unity of the “*I think*,” or of self-consciousness.’ – *SL*: 515/6:254. Cf. also *SL*: 515-6/6:254-5 or *SL*: 654/6:440-1.

⁸ Hegel reads Kant uncharitably when claiming that Kant is a “subjective idealist” (*EI*: §46R, 91/123) or that understanding and sensibility are two separate things that cannot properly cooperate (*LHPbIII*: 348). Bristow (2007: 19) says that Kant’s idealism is subjective because ‘[w]e can know objects only as relativized to our human standpoint.’ But why conceive of the human standpoint as parochial? Are it not human beings that can understand Hegel’s non-parochial philosophy and whose “standpoint” Hegel’s philosophy seeks to articulate? Houlgate criticizes Pippin for his claim that Hegel’s concept of the Concept is indebted to Kant’s notion of self-consciousness (Houlgate 2006: 139). This criticism is based on accepting an uncharitable reading, wherein Kantian self-consciousness is degraded to mere external reflection. Finally, Sedgwick holds that Kant’s philosophy is saddled with a dualism between understanding and sensibility because ‘we cannot know that our concepts capture the nature of [the sensibly given] content.’ (Sedgwick 2012: 8) This raises the following interesting question: what is the kind of knowledge that is in question here? If Kant, in the *Critique of Pure Reason*, answers the question “How is empirical knowledge possible?” by laying out how exactly sensibility and understanding are unified so that empirical knowledge comes about, then the knowledge in question was indeed provided, I think. For a difficult but illuminating account of how the relation between understanding and sensibility in the *CPR* can be read in a non-dualistic way, cf. Engstrom 2006.

⁹ Cf., e.g., Feder/Garve 1782: 53; Jacobi 1787: 171-175; *FK*: 320; *LHPbIII*: 348; Guyer 1993; Adams 1997; Langton 1998; Van Cleve 1999: 11, 49; Bowman 2013: 5, 123.

presupposition. This notion can be understood from within the human standpoint, however, by considering it to be a “limiting concept” that we attain by starting from the concept of an object of experience and then abstracting away our forms of intuition. Importantly, the concept thus formed, this abstraction, is ‘parasitic’¹⁰ for its content on the concept of an object of experience. This constitutes the kernel of a non-traditional, non-dualistic reading of Kant. It is such a reading that I think is helpful in order to set the stage and to bring similarities and dissimilarities to Hegel into view and, thereby, to illuminate Hegel’s account of how freedom is realized in nature.

As I discussed in chapter 2, the reading of Kant that I lay out here shares crucial aspects with readings proposed by Lucy Allais¹¹ and Henry Allison¹². These aspects are to distinguish between determinism and predeterminism and to read Kant as endorsing determinism while rejecting predeterminism. Predeterminism is here understood as the view that any event is pre-determined to occur in the way it does, given the laws of nature and the history of the universe. Predeterminism also entails that the future is fully determined given the state of the universe at one moment and the laws of nature.¹³ That is, all movements of the hands or lips of a person not yet born are already fixed now. On my reading, Kant’s argument for the compatibility of determinism and freedom is not to be understood as his endorsing that freedom is compatible with predeterminism. On the contrary, Kant explicitly decries such a compatibilism as leaving us merely with the freedom of a roast on the turnspit to affirm its anyway occurring motion.¹⁴ Rather, freedom is compatible with determinism because—contrary to a natural tendency in us to think so—determinism does *not* entail predeterminism. This

¹⁰ Cf. Allison 1992: 36, where Allison uses that term for the limiting concept of an intuitive intellect.

¹¹ Cf. Allais 2018. While I share Allais’ view on determinism’s compatibility with an open future, I disagree with her reading of the thing in itself. Maybe it is her reading of the thing in itself that makes her hesitant to attribute her view about determinism to Kant.

¹² Cf. Allison 2020: 212-4. Similar to Allais, also Allison retains a traditional, dogmatic reading of the thing in itself—even though this reading receded into the background in Allison’s later writings.

¹³ Kant is traditionally and nowadays read as a pre-determinist. Cf., e.g., Schopenhauer 1839, Stang 2016: 215-6, Proops 2021: 288-9.

¹⁴ *CPtR*, V:97.

difficult thought can be gotten into view through Kant's argument that predeterminism is false. The resulting picture is one where Kant is a determinist insofar as he considers every actual event to flow with necessity from a temporally previous cause, but where this determinism is compatible with an open future.

Kant's argument against predeterminism is stated in the third Antinomy of Reason in the *Critique of Pure Reason*. Briefly construed, it runs as follows. A central point consists in our recognizing that predeterminism involves the claim that every event is sufficiently determined by the laws of nature and the past of the universe. Thus, the freedom to act otherwise is excluded—be it the momentary ability to act otherwise at any given moment or the long-term ability to act otherwise in the future by acquiring relevant knowledge and/or by changing one's habits. A further important thing to note here is that, according to Kant, the natural causation involved in predeterminism operates in such a way that an event is “externally determined”: an event occurs due to factors external to it that make the event occur in the way it does. For example, an ice block melts because of sunshine.¹⁵ For an event to be pre-determined thus means for it to be sufficiently determined by an external cause. Yet, such an external determination is only a case of natural causation if the causing of the event is equally a natural event. The sun shining onto the ice block is equally a natural event, for example. A natural event, however, cannot account for the sufficient determination of the event in question. For, the causing event must itself be externally determined. And that point equally holds for the cause of the cause, the cause of the cause of the cause, and so on. Thus, the idea that an event is sufficiently determined through natural causation falls to the ground. The point here can also be expressed in the following way. The burden to provide a sufficient cause gets placed on a natural event, from where it gets moved

¹⁵ It is in general important to note that Kant has a different conception of an *event* and of *causality* than Hume. For Kant, events are changes of the accidents of a substance, i.e., of the properties of an object. (Cf. Watkins 2005 ch. 4. While I think that Watkins rightly argues that Kant does not have a Humean conception of causality, I agree with the criticism of Watkins' contention that causes are necessarily indeterminate in Hennig 2011.)

to its cause, then to its cause, then to its cause, and so on. Thereby, the burden of providing a sufficient cause always gets kicked down the road rather than answered.

This is the core of the argument of the “thesis”-position of the Third Antinomy. Kant puts it as follows:

If [...] everything happens according to mere laws of nature, then at every time there is only a subordinate but never a first beginning, and thus no completeness of the series on the side of the causes descending one from another. But now the law of nature consists just in this, that nothing happens without a cause sufficiently determined a priori. Thus the proposition that all causality is possible only in accordance with laws of nature, when taken in its unlimited universality, contradicts itself, and therefore this causality cannot be assumed to be the only one.¹⁶

According to predeterminism, events are sufficiently determined through external causation. In order to save this doctrine in the face of the just stated argument, a different kind of causation must be invoked. This different, non-external causation will then provide the sufficient determination that external causation cannot provide. However, as the *antithesis*-position is quick to point out, such a different kind of causation would not be natural, because the cause would then not be an event. This different kind of causation would thus not make any connection to events and, hence, could not be the sufficient cause of an event.

With non-external causation ruled out, we are back at the point that natural causation is the only causation there is. But if it is the only causation there is, then it must be sufficient for explaining why an event occurred in the way it did. Yet, natural causation cannot bear that burden, as it were. But, it stands to reason that something conditional like an event can only occur if all its conditions are in

¹⁶ B472-4/A444-6.

place. Thus, there *must* be a sufficient cause—if not natural, then other. A non-natural cause, however, ...

This is the central point of Kant's antinomy about causation and freedom. We are perennially going back and forth between the thesis' claim that there must be a non-natural kind of causation and the antithesis' claim that there cannot be a non-natural kind of causation.

Kant's solution consists in his pointing out that throughout this argumentation, we treated events as if it were accidental to them that they are perceivable by human beings. Yet, according to Kant, the concept of an event only has content because the content of concrete event-concepts¹⁷ is given through the senses—the senses of a human being. The claim that events are sufficiently determined by a cause must hence be understood as a claim about perceivable events and perceivable causes.¹⁸ In this way, the concepts of event, cause, and sufficient determination are essentially tied to human perception and experience. That is, according to Kant, it holds for every perceivable event that it has a sufficient cause. This is the first step in the solution. Kant's point that the concepts of event, cause, and sufficient determination only have content because the content of concrete event-concepts is given through the senses¹⁹ also entails that the primary locus of the deterministic doctrine is *actual* events: For every actual event it holds that it must have a sufficient cause. Now, every possible event can become actual and in this sense it holds that every possible event has a sufficient cause. Yet, the decisive step in the natural yet specious move from determinism to predeterminism consists in our neglecting the significance of the difference between actuality and possibility, specifically, between actual events and causes on the one hand and possible events and causes on the other. Once we

¹⁷ Concrete event concepts are the concepts of everyday events such as ice-block melting, sun-shine, wind breezing, ball rotating, scraping, pushing, ... but also scientific event-concepts such as planetary motion, chemical interactions, atom decay, ...

¹⁸ Perceivability here is not restricted to direct perception. For example, Kant thinks that we perceive magnetism by seeing iron filings move. (Cf. B273/A226.)

¹⁹ For simplicity's sake I leave aside the issue of the way in which the categories can be said to have content even though they stand in need of saturation by sensibly given matter.

imagine a chain of causes trailing off into infinity, we have left the solid ground of actual events and causes. Using the mere form of natural causation, we move into a sphere where we do not care about whether concrete data about concrete causes can be supplied so that we could speak of actual causes. It is this disregard for concrete experience and actuality that underlies predeterminism, according to Kant.

It holds for every actual event that it must have a sufficient cause. But this does not allow for the conclusion that this sufficient cause is realized in a way that is not tied to experience; through an actual infinity of causes, for example. We can form the concept of an infinite chain of causes—just as we can form the concept of the causal history of the universe or of the state of the universe at time t_1 —yet, such concepts are essentially abstract, because we can never have a corresponding perception of them. An infinite chain of causes is never actual. But, Kant holds, we nevertheless need that concept in order to provide us with orientation in our empirical inquiries. He expresses this by saying that the concept of an infinite chain of causes is not “given”, but “set as a task”.²⁰

The resulting picture could be expressed by saying that events are determined by their causes only *locally*, not globally. It is once we neglect the essential connection of said concepts to human experience—once we forget our finitude, as it were—that we fall into the antinomy. Thus, Kant is a determinist regarding every actual event, but not a pre-determinist.

In this way, Kant shows the pre-deterministic attack on freedom to be ill-founded. However, Kant equally rejects the argument of the thesis position that we *must* introduce a non-natural kind of causality—a causality of freedom—in order to make sense of nature. That would introduce uncaused causes into nature which, as such, could not be part of nature.²¹ For, everything in nature has a cause. Kant is explicit that his argument only establishes that freedom is not ruled out. A consequence of

²⁰ B526/A498.

²¹ Cf. B479/A451.

this is that there can be no account of *how* freedom can be real, i.e., of the way in which freedom can be manifest in nature.²²

One may think that this is a problematic result. For, if freedom is essential to human beings, then Kant's position seems to involve that we can in principle not make sense of this essential aspect of ourselves. Hegel took this outcome to be philosophically unacceptable. In the following section, I lay out how Hegel, in the Mechanism chapter of the *Science of Logic*, shows how freedom can be realized in nature by showing how already solar systems exhibit a rudimentary form of freedom.

II. Degrees of Freedom

How does Hegel seek to go beyond Kant's merely negative argumentation regarding freedom in its relation to nature? If one looks into recent books in the scholarship with an eye towards this question—books such as Terry Pinkard's, James Kreines', or Karen Ng's—then, despite the different approaches, one can find the following strategy: if Hegel's account of *life* is made sufficiently transparent then it will become clear how core aspects of human freedom are present in life—especially animal life—which shows that freedom and nature are not as starkly opposed as Kant's account seems to have it. For example, Ng writes: 'Hegel [...] aim[s] to demonstrate that the infinite activity of reason and freedom is immanent in nature and, more specifically, immanent in the activity characteristic of life.'²³

Now, discussing organisms and drawing attention to what is actually going on in organisms *can* convince the sceptic about freedom that she has unjustifiedly restricted her conception of what there is. Such a discussion involves drawing attention to the internal organization of living beings: that we cannot understand what, for example, a heart is if we do not recognize its function of pumping blood.

²² Cf. B585-6/A557-8.

²³ Ng 2020: 133.

Furthermore, such a discussion involves to point out how the internal organization of, say, a plant is kept up by the plant's incorporation of inanimate material from outside (nourishment), and how the concept of *injury* finds application in organisms—with injuries typically leading to a goal-directed process in the injured organism, the process of healing. Internal organization, nourishment and healing processes are not to be found in nature *exclusively* conceived along the lines of external causation.²⁴ Thus, someone who thinks that determinism is incompatible with freedom can be brought to reconsider her attitude when confronted with such pertinent details of certain natural beings. For, if organisms exhibit features that do not fit the mould of external causation but are clearly in nature, then it is wrong to hold that natural phenomena can *only* be explained by means of external causation.

While I am sympathetic to this strategy, it faces the problem that someone who believes that nature is at bottom nothing but the realm of external causation will likely respond with the claim that life processes are *inessential*—that future research will explain them in terms of external causation—or that they are an *irresolvable puzzle*.²⁵ One way in which this problem is manifest regarding the books mentioned above is the following. Kreines' book says the most about the issue of the difference between mechanism—which roughly is Hegel's term for conceiving of nature along the lines of external causation²⁶—and life. At a point that I think is crucial in the argumentation of that book, Kreines addresses the relation between mechanism and life by invoking Hegel's statement that mechanism is 'indifferent' to being taken up in the unity of life.²⁷ Yet, the sceptic about freedom's

²⁴ I leave out the aspect of reproduction here because I think it is less suited to quickly bring the distinctive form of life into view.

²⁵ Kant's discussion of life in the *Critique of the Power Judgement* is often read as expressing the attitude that life is irresolvably puzzling. McLaughlin (1989: 146-7, 152), Zanetti (1993: 352), and Cohen (2004: 193-4), among others, claim that the Antinomy of the Power of Teleological Judgement can only be "resolved" by appeal to a supersensible ground of nature which we cannot understand.

²⁶ Note Martin's important point that only in the initial form of mechanism, 'the Mechanical Object', Objects are external to each other. (2012: 378n332.) Thus, when 'the Mechanical Process' and 'Absolute Mechanism' are also taken into account, mechanism comprises more than just external causation, i.e., Objects in external relations to each other.

²⁷ Kreines 2015: 101-2.

reality will likely find it puzzling *how it is possible* for mechanism to be indifferent in that way. Or such a person will understand said indifference of mechanism in a way that is compatible with predeterminism; for example, on the model of a humpback whale's indifference to whether it carries barnacles or not. That is, said sceptic can endorse "indifference", thinking that it is external causation that "runs the show" in nature, and to which higher forms of unity and explanation are an indifferent addition that could also be absent.

Hence, I submit, it is helpful to turn towards Hegel's statements about the rudimentary form of freedom that is present in 'Absolute Mechanism' and its paradigmatic realization in solar systems. First, this is helpful for the issue of how to understand Hegel's conception of freedom, as solar systems realize the following aspects of that conception: 1) absence of determination from without, 2) determination through an internal principle, an internal principle that 3) is a Law²⁸ that is not external to the Objects it governs, but fully suffuses them and thus 'is the pervading immanent essence of the objects'.²⁹ A consequence of aspect 2) is that the motion of solar systems could in principle go on forever while aspect 3) means that solar systems exhibit an 'intimate type-token connection'³⁰ between the Law and the planets. Second, solar systems are hardly in danger of being declared to not really be in nature, or to only be in nature to that extent that future research might show that solar systems are *actually* governed by *qualitatively different* laws than those found by Kepler and embedded in a general theory of mechanics by Newton.³¹ Thus, if turning one's attention to the specificities of solar systems yields that solar systems are not properly captured in terms of external causation *and* realize a rudimentary conception of freedom, then this will be helpful for convincing the sceptic about

²⁸ I capitalize Hegel's technical terms.

²⁹ *SL*: 641/6:423.

³⁰ Kreines 2015: 206. This is Kreines' phrase for the relation between Universal and Singular within the 'concrete universality' exhibited by life and, even more so, the Idea. (Cf. 2015: 93-100, 203-6.)

³¹ It is plausible, I take it, to hold that the embedding—and to that extent altering—of Newtonian mechanics in Einstein's theory of general relativity does not qualitatively alter the character of these laws, even though, e.g., the concept of space is altered in that embedding.

freedom's reality and it will be an important step in going beyond Kant by showing *how* freedom can be realized in nature. Having this intermediate step between external causation and life in view will furthermore be helpful if life is considered to be irresolvably puzzling, because the seeming tension between external causation and life is thereby eased if not lifted.

My approach here is novel, as, in books about the *SL*, it is common to give short shrift to the Mechanism chapter (Pippin 1989 & 2018; Ng 2020), to claim that it does not belong into the *SL* at all (Hösle 1987: 247), that Hegel speaking of 'Absolute Mechanism' makes no sense (Rosen 1974: 48), or to find it necessary to depart from Hegel's text (Martin 2012). Martin makes the important point, against scholars such as Burbidge, that only in the immediate form of Mechanism the Objects are external to each other.³² Yet, I do not find in Hegel's text Martin's claim that the realm of Objectivity forms a *continuum* (2012: 378). Kreines (2015) discusses parts of the Mechanism chapter that have critical import for contemporary philosophy of science, but does not go into the positive parts of that chapter with respect to freedom. An intimate unity of type and token—or Universal and Singular—and thus freedom, according to Kreines, only come onto the scene later in the *SL*.³³ Finally, Mure (1950), Carlson (2007), and Moss (2013) do discuss the Mechanism chapter. Yet, while all three texts are helpful—primarily to a reader who is well-acquainted with Hegel's writing style—they all push the method of the *Phenomenology of Spirit* from 1807 into the *SL*.³⁴ Furthermore, they all discuss the Mechanism chapter primarily in terms of Hegel's difficult theory of concepts, judgments and

³² Cf. note 26.

³³ Cf. note 56 and Kreines 2015: 220.

³⁴ Mure reads the *SL* as if it employed the method of the *Phenomenology* insofar as he explains the workings of the *SL* in terms of "consciousness" and the development of "understanding" and "spirit". (1950: 235) Carlson does so by invoking "external intelligences" and a contrast between understanding and dialectical reason. (2007: 530, 532) And Moss does so by taking it to be relevant whether 'mechanical thought' can 'cognize itself': 'mechanical thought does not cognize itself, for qua mechanical it ignores itself. By treating itself mechanically, it does not attend to what it is, and does not know itself.' (2013: 76) While I agree with the content of Moss' metaphor that the Concept "resurrects" itself in Objectivity, I take it that the following question brings out a limit of this metaphor: Why did the Concept die beforehand, presumably in the disjunctive syllogism? Also, Moss holds that the *SL* consists merely in 'logical analysis' and that it requires a further step to 'apply' it to 'non-logical objects'. (73) As laid out in the beginning of section I, I disagree with such a reading of the *SL*.

sylogisms. While, in these texts, it is simply accepted that Hegel applies this theory to solar systems, it would be a goal of mine in this chapter to contribute to the task of making understandable why Hegel is *justified* in applying this theory of his to solar systems in the way he does.³⁵

I want to begin my positive case with the briefest of a sketch of Hegel's concept of freedom:³⁶ Hegel speaks of 'freedom, i.e. not being dependent on an Other, the relating of itself to itself.'³⁷ While a full-blown 'relating of itself to itself' involves mindedness³⁸ and eventually relations of recognition in a by and large rationally organized society,³⁹ I argue that a rudimentary, inanimate, and thus non-conscious form of it is present in solar systems, in their having a principle of motion that does not involve bodies external to the solar system. But the latter is of course an unorthodox usage of the term freedom.

The claim that solar systems embody freedom will strike most readers as bewildering. Yet, Hegel writes of the 'free mechanism' of solar systems several times in the section 'Absolute Mechanism' in the *SL*.⁴⁰ Then, there are many passages where Hegel writes of 'free motion' and 'absolutely free motion' in relation to solar systems in *SL* and *Encyclopaedia*.⁴¹ Furthermore, he does occasionally write

³⁵ There are several texts that helpfully discuss Hegel's account of solar systems and other mechanistic phenomena in his *Philosophy of Nature*. (Houlgate 2005: 130-156, Stone 2005: 29-44, Halper 2008, Rand 2017, Kabeshkin 2021) While the *PbN* presupposes the concepts developed in the *SL* and does not have the a priori rigor of the *SL*, these texts are helpful for understanding the Mechanism chapter of the *SL*, insofar as they make Hegel's account in that chapter more concrete.

³⁶ For a thorough discussion of that concept, cf. Pippin 2008.

³⁷ *EIII*: §382A, 15/26. For basically the same statement with respect to freedom in relation to the will, cf. *PbR*: §23, 54/74-5.

³⁸ Cf. *EIII*: §385, 20/32.

³⁹ Cf. Pippin 1999, esp.: 194, Pippin 2008.

⁴⁰ *SL*: 643-4/6:426-8.

⁴¹ *SL*: 286/5:392; 297/5:406; *EII*: §253, 1:221/41; §264R, 1:245/65; §267A, 1:256/79; §268, 1:257/80; §268A, 1:257/80; §269A, 1:262/84-5; §270, 1:263/85; §270R, 1:263/86, 1:266/89, 1:266/90, 1:268/91; §270A, 1:272/97, 1:276/101, 1:280/105; §344A, 3:49/376; *EIII*: §392A, 36/53.

of ‘free matter’ in relation to solar systems,⁴² of the ‘free central body’,⁴³ of ‘free heavenly bodies’,⁴⁴ or of the ‘free existence’ of matter and motion in solar systems.⁴⁵

What makes the situation more complicated is that there are also a few passages where Hegel explicitly denies that freedom is present in the realm of nature. For example, in the introduction to the philosophy of nature in the *Encyclopaedia*, Hegel writes the following in relation to his claim that nature is the realm of externality.

In this externality, the determinations of the [Concept] have the appearance of an *indifferent subsistence* and *isolation* with regard to one another; the [Concept] is therefore internal, and nature in its determinate being displays *necessity* and *contingency*, not freedom.⁴⁶

Hegel states here that insofar as nature is the realm of externality, the Concept is not manifest in it and is thus merely internal. Therefore, freedom is not manifest in such externality—an externality that finds its reality in the concept of *matter*.⁴⁷

Yet, almost as a direct answer to that statement, Hegel says the following early in a lecture on the third part of the *Encyclopaedia*.

That the externality and multiplicity of matter cannot be overcome by nature is a presupposition which, at our standpoint, at the standpoint of speculative philosophy, we have here long since left behind us as invalid. The philosophy of nature teaches us how nature sublates its externality by stages, how matter already refutes the independence of the individual, of the many, by gravity, and how this refutation begun by gravity [...] is

⁴² *EII*: §264A, 1:246/66; §268A: 1:257/80.

⁴³ *EII*: §286R, 2:42/143.

⁴⁴ *EII*: §376A, 3:213/539; §311A, 2:98/202.

⁴⁵ *EIII*: §380, 8/16.

⁴⁶ *EII*: §248, 1:208/27.

⁴⁷ Cf. *EII*: §248R, 1:209/28; §252, 1:217/37; §253, 1:221/41; §261, 1:237/56; §261R, 1:237-8/56-8.

completed by animal life, by the sentient creature, since this reveals to us the omnipresence of the one soul at every point of its bodiliness, and so the sublatedness of the asunderness of matter.⁴⁸

Hegel says that nature is *not only* the realm of externality. For, ‘nature sublates its externality by stages’. I.e., already within the realm of nature, externality is increasingly overcome. That, already in nature, externality is increasingly overcome coheres with Hegel’s claiming in *EII* §249 that ‘[n]ature is to be regarded as a *system of stages*’ and it provides some content as to the meaning of this hierarchy of stages. With respect to the topic of freedom, which in the quote above from *EII* §248 is opposed to externality, such a gradual overcoming of externality suggests that freedom is *gradually increased* in the ascending stages of nature. Thus, Hegel’s seeming incoherence of ascribing freedom to nature in the case of solar systems but denying freedom to nature as a whole can be lifted by taking freedom to come in degrees. Of course, full-blown freedom can only be found in the realm of spirit and thus there is no freedom in the full sense in mere nature. Yet, this is compatible with *some* aspects of full-blown freedom being realized in nature; and having in view in what way and to what degree freedom is already realized in nature may be helpful or even necessary for us to realize our own freedom. Moreover, the reading I am proposing coheres with further usages by Hegel of the term ‘free’ with respect to natural phenomena, such as his writing, in *EII* §273, of ‘free physical qualities’ and ‘total free individuality’, the latter pertaining to shape, magnetism, electricity, and the chemical process.

Having thus argued for why it need not have been a misstep by Hegel to constantly write and speak of freedom in relation to Absolute Mechanism and its paradigmatic realization in solar systems, I now want to turn to his account of this rudimentary form of freedom. That solar systems exhibit a rudimentary form of freedom can be brought out in the following way. As mentioned above, a

⁴⁸ *EIII*: §389A, 32/47.

paradigm case of external causation is causation along the lines of the inertial conception of motion.⁴⁹ An example of how that conception works is that a billiard ball's motion is determined by something external to it, for example, by another billiard ball that has collided with the first billiard ball. Billiard balls can move in all kinds of ways, but if we want to know why *this* billiard ball moves in exactly this way, then, according to the logic of external causation, we have to ask *what other object made* the billiard ball move in this way. In contrast to such a case, the question “Why does this planet move in the way it does?” is not obviously answered in the same way. According to Hegel, this question is answered in an importantly different way, namely by recourse to its being a planet. Because the object of inquiry is a planet, the unit of significance is the *solar system* the planet is a part of: in order to determine location or velocity of a planet, the star(s) at the centre of the solar system and other planets of the solar system have to be taken into account, but—at least in principle—nothing beyond that. Furthermore, it is qua planet that *the way* in which the planet moves is determined: it orbits the star(s) in the centre of the solar system, and it does so indefinitely.⁵⁰ Dissimilar to the case of the billiard ball, the question “What initiated the movement of the planet?” is *not* crucial to understanding why this planet moves in the way it does.

Solar systems can thus be taken to fulfil the first aspect of freedom listed above: absence of external determination. Not being determined from without, solar systems are determined from within. They are so by having an *internal principle* according to which its Objects, the planets, are determined. This principle are Kepler's laws of planetary motion, Hegel holds: ‘the immortal honour

⁴⁹ I owe the term “inertial conception” to Rand 2017. The term refers to a conception of motion and change, namely the one expressed in Newton's first axiom or law of motion in the *Principia*, according to which a body persists in its state of motion unless acted on by a force. For example, a body moving in a straight line will not by itself slow down but rather continue to move in a straight line with the same speed unless acted on by a force.

⁵⁰ Kreines calls this point Hegel's ‘concept thesis’, according to which the behavior of some things is to be explained by recourse to what they are, i.e. by recourse to their concept. (Cf. Kreines 2015) Thompson 1995 is a helpful attempt to make this ancient point available to readers who grew up in post-Fregean analytic philosophy.

of having discovered the laws of absolutely free motion belongs to Kepler'.⁵¹ In the *SL*, Hegel says more about the character of the Law within Absolute Mechanism. The law is not external to the Objects, but rather 'is the pervading immanent essence of the objects'.⁵² In relation to the Objects, '[t]he law is indeed immanent in them and it does constitute their nature and power'.⁵³ Given that Absolute Mechanism also pertains to the realm of spirit,⁵⁴ one can say that 'the Law' is not a conception of the law as in the Clash's singing 'I fought the law and the law won'. The attitude expressed in that song is one of opposition to the law, of the law's being an oppressive force. In the realm of spirit things can of course always go wrong, not live up to their concept; that is, there can be bad laws, or people can be opposed to laws that are actually good. But the good and defining case of 'the Law' is one in which the law is not opposed to the Object, but rather "fully suffuses" it. This is the case when planets revolve around a star or when a person acts in a morally good way, i.e., according to the categorical imperative. The motion of planets is thus to be described by a law that is internal to them, that describes what planets are; just as agents and their actions are to be described by the moral law, though in the latter case it is possible for the individual agents and actions to deviate from the Law that governs them. Accordingly, Hegel says in the addition to *EII* §264: 'while finite matter receives motion from outside, free matter moves itself [...] Similarly, the ethical person is free in the laws, and they are only external to the unethical person'.⁵⁵

It can thus be said that with the Law's fully suffusing the objects it governs so that the Law is their essence there is an "intimate unity" between type and token, or between Universal and Singular.⁵⁶

⁵¹ *EII*: §270R, 263/86.

⁵² *SL*: 641/6:423.

⁵³ *SL*: 644/6:428.

⁵⁴ Cf. *SL*: 641/6:424; 631/6:410.

⁵⁵ Translation amended.

⁵⁶ Kreines gives a helpful account of concrete universality as it is present in Life, of which an intimate unity between type and token is one mark. (2015: 98-100, 206) However, he thinks that this intimate unity between type and token only arises with Life and explicitly denies it for 'something lawful'. (212) I think this belief stems from the typical neglect of the Mechanism chapter—even though Kreines devotes more attention to it than most scholars.

Hence, solar systems also realize this aspect of freedom. In sum, the freedom of solar systems consists in them exhibiting the three internally connected aspects of 1) absence of external determination, 2) determination through an internal principle, which is 3) a Law that “suffuses” its Objects, therein exhibiting an intimate unity between Universal and Singular.

It should be noted that while Hegel uses terms such as ‘individuality’ and ‘objective universality’ in order to describe solar systems,⁵⁷ he does in general not use the terms ‘self-determination’ and ‘concrete universality’ to do so.⁵⁸ Hegel starts using these latter terms affirmatively once the *SL* has advanced to the Teleology chapter.⁵⁹ What Absolute Mechanism lacks in order to exhibit proper self-determination and concrete universality is a certain negativity or *opposition* of Concept to Objectivity. This opposition is present in the ‘movement of the end’:

[T]he movement of purpose can now be expressed as being directed at subsuming its *presupposition*, that is, the immediacy of the object, and at *positing* it as determined by the concept. This negative relating to the object is equally a negative attitude towards itself, a subsuming of the subjectivity of purpose.⁶⁰

That is, the intimate unity between Universal and Objects that is present in Absolute Mechanism is lacking in negativity or difference in order to be the negative unity of self-determination and concrete universality.

Having thus determined the rudimentary form of freedom that solar systems exhibit, I want to turn to an objection that might arise. Someone who takes nature to be the realm of external causation

⁵⁷ *SL*: 643/6:426.

⁵⁸ In the Mechanism chapter, Hegel writes at one point of a ‘self-determining unity’ in order to characterize the relation between Center and external objectivity, i.e., between star and planets. But Hegel does not use the term ‘self-determination’ to characterize the relation between Universal and Singular in the Mechanism or Chemism chapter.

⁵⁹ *SL*: 656/6:444.

⁶⁰ *SL*: 658/6:447.

may consider the absence of external determination of an established solar systems to be *inessential* and claim that what we have to ask is how the solar system *came about*. But note that when we ask that, we do *not* consider the object in question to be determined as part of a higher unit—the planet as part of a solar system—and the circular motion to be in principle eternal. One could say: we are then not treating the solar system as a solar system, but press it in the mould of external causation by shifting the question from “Why does this planet move in the way it moves?” to “Where did the solar system as a whole come from?”. One can of course also ask this latter question, but one should note how thereby the distinctive form of planetary motion, which can in principle go on forever, is not taken into account anymore. That the form of solar systems is—its continuity to lower forms of Mechanism notwithstanding—*sui generis* can be seen in the fact that we cannot determine how the solar system formed when merely considering the revolution of the planets around the star.

I mentioned above how considering solar systems can be helpful for someone who, confronted with the distinctive features of life, considers these distinctive features to be *explained away* by future research or who comes to the conclusion that life is irresolvably *puzzling*. We are now in a position to spell out how solar systems can be helpful regarding these two mindsets. Both mindsets flow, I think, from taking external causation to be the only legitimate way of describing *nature*. According to the first mindset, life can be at best an inessential epiphenomenon, whereas an exponent of the mindset of puzzlement acknowledges the different form that is exhibited by living beings and is now at a loss as to how that form could be present in nature. Considering solar systems can be helpful regarding both mindsets because the step from external causation to solar systems is relatively small and because solar systems are hardly in danger of exhibiting some objectionable teleology. It is quite intuitive how a body may at first move in a straight line, according to the inertial conception of motion, and then gets “captured” by a star and now exhibits the different form of determination that planets exhibit. Clearly, nothing spooky or weird is going on here that would warrant reduction to external causation. Thus,

the transition from external causation to something like “internal causation” or “explanation by recourse to a larger whole” can be more easily acknowledged to be unproblematic when the specific form of solar systems is taken into account.

III. The Forms of Mechanism and Their Unity (as Established through Hegel’s Method)

This account of the freedom of solar systems is, I think, plausible and it can bring out that solar systems are misconstrued when we seek to explain them by means of external causation. Nevertheless, a staunch believer in the exclusivity of external causation may insist on there being no relevant difference between a case of collision and a case of planetary motion: both are cases of external causation and simply differ with respect to the values of the variables and initial conditions. This mindset can find expression in that person switching the question from “Why do the planets move in the way they do?” to “Where does the solar system come from?”, as described above. While I take it to be a good question to ask this person how their staunch belief in external causation is justified, Hegel would say that this staunch believer is right insofar as I have so far merely presented her with arguments that are intuitively plausible rather than systematically rigorous. Notwithstanding the fact that different difficulties would arise were such a staunch believer to be confronted with Hegel’s conception of a systematically rigorous argument, it is worth noting that it is at least in principle Hegel’s demand not to argue with proponents of philosophical positions by presenting them with arguments external to their view. Rather, Hegel seeks to scrutinize the philosophical position at hand, to identify the basic concepts of that position and how they are supposed to interact, and to thereby bring certain deficiencies of that position to light—deficiencies that then give rise to a successor

position.⁶¹ In the following I am giving an account of how this scrutinizing works and how Hegel thereby arrives at his account of solar systems.

This account will give a sense of the way in which, according to Hegel, the pre-determinist has to be dealt with and of Hegel's method more generally. Furthermore, the account includes a concrete case of the way in which Hegel inherits and goes beyond Kant's negative argument, which allows for a comparison between Kant's and Hegel's method in dealing with predeterminism. Giving such an account necessitates more extensive trafficking in one of the most notorious aspects of Hegel's: his idiolect. In relation to this aspect, even a philosopher who is in general positively disposed towards Hegel—Michael Thompson—speaks of 'a completely indefensible form of expression in writing.'⁶² I try my best to keep said account as understandable as possible. For, only successful communication makes the universality of Hegel's philosophy concrete.

Seeing in detail how thinking through external, i.e., mechanical causation leads to the form of Absolute Mechanism, in which mechanical causation is preserved ("sublated"), allows us to see how mechanical causation is not opposed to the rudimentary form of freedom that solar systems exhibit, but rather *figures in it*. This is in turn helpful in understanding how mechanistic relations can figure in higher, more complex forms like life or human agency.

The centre of Kant's argument against predeterminism, as laid out above in section I of this chapter, is a reflection on the temporality of causation: If causes of events are essentially in time, then there cannot be an actual, infinite chain of causes. Hegel argues on a more abstract level. For, Hegel thinks that Kant's reliance on space and time is a liability when it comes to first philosophy.⁶³ Hegel

⁶¹ This is the operation of "determinate negation", which is the basic operation of Hegel's "dialectical method". Cf. Henrich 2003: 316-31; Martin 2012: 37-54; Bowman 2013: 26-61; Pippin 2018: 139-80.

⁶² Thompson 2008: 12.

⁶³ Cf. McDowell 2007 and Rödl 2007.

can be understood as isolating the pure logical structure—in Hegel’s sense of “logic” and “purity”⁶⁴—of Kant’s argumentation. The elements of this pure logical structure, which constitute the *starting point* of Hegel’s argumentation in the Mechanism chapter, are as follows. What there is (in the world, or nature, or objectivity) is: Objects. The first thing to say about Objects is that they are singular things. Each Object is here conceived of as self-standing and external to the other Objects. Furthermore, we here want to conceive of what there is, i.e., objectivity, as being populated by Objects. “Everything is (directly or indirectly) an Object,” we could say. Objects are thus singular while everything is conceived of as an Object, which renders the concept of an Object universal.⁶⁵ To conceive of Objectivity as being populated by Objects is a thought that Hegel calls ‘the Mechanical Object’:

the differentiated moments [of Objectivity] are *complete* and *self-subsistent objects* that, consequently, even in connection relate to one another as *each standing on its own*, each maintaining itself in every combination as *external*. – This is what constitutes the character of *mechanism*⁶⁶

On the basis of the very sparse determinations of the Mechanical Object just stated, the thought of the Mechanical Object is scrutinized or “thought through” in the following way. Due to the singularity of the Objects, the Objects are to be conceived of as different from each other. Due to their universality, however, they are all the same: they are all Objects and so far no further determinations are on the table that would allow for a differentiation of one Object from another. The claim to difference must hence be realized in some *particular determinations* of the Objects, i.e., in Kant’s terminology, in the accidents of substances. With the thought expressed in the last sentence, it

⁶⁴ For a helpful discussion of how Hegel understands “logic” (and its purity), cf. Pippin 2018.

⁶⁵ Cf. the following pertinent quote by Hegel about the universality of the concepts we use in order to say what there is: ‘Principles of the older or the more recent philosophies, be it water or matter or atoms, are thoughts, something universal, ideal, not things, as they are immediately encountered, that is, in sensuous singularity.’ (SL: 124/5:172)

⁶⁶ SL: 631/6:409.

is “posited” that Objects have particular determinations. That is, philosophical reflection yielded that the difference between Objects must be realized in the particular determinations of the Objects and this point is now present and established in the philosophical investigation into Objectivity that Hegel pursues. In this way, Hegel establishes that Objects have determinations.

But so far it is just a brute fact that Objects have determinations. How can we understand the Objects to have particular determinations? As of yet, nothing accounts for the unity of an Object and its determinations. That is, the philosophical question “How can an Object have particular determinations?” has, at this point of the dialectic, no answer. Yet, the task at hand is to give a philosophical account of Objectivity in general and of Mechanical Objects in particular. And it is germane to Hegel’s method to only draw on concepts that were so far introduced in order to state an account that answers the philosophical question at hand. Given that the only thing we are thinking so far are Objects, the only option for what could account for an Object’s having a certain determination is another Object. That is, an Object’s having the determinations it has is explained by that Object’s having *received* that determination from another Object. We have thus arrived at the basic structure or form of the thought “the Mechanical Object”: what there is are Objects with particular determinations, and these Objects have their determinations on account of other Objects. That is, whatever determinations an Object has, it has *received* them from another Object.⁶⁷

One Object’s receiving a determination from a different Object is Hegel’s “logical distillation” of the operative relation of predeterminism, which I called “external causation” above. Furthermore, it is in this way that Hegel takes up Kant’s argumentation. Just as, in the Third Antinomy, the question of what the cause of an event is, so the question of what can account for an Object’s having a

⁶⁷ Hegel’s conception of Mechanism is more abstract not only than Kant’s but also than that of the classical mechanists like Descartes and Locke. Hegel would claim that what he lays out in the Mechanism chapter of the *SL* is also the basic structure of classical mechanism as prevalent in Descartes’ time: all there is is undifferentiated matter that nevertheless is singular, and the relevant determination of one bit of matter (motion) is received from other matter.

determination does not go away when the can is kicked down the road to another Object. One Object is determined by another Object, which is in turn determined by another Object, which is in turn...

For Hegel, the regress shows that this thought does not accomplish what it was supposed to accomplish, namely to give an account of how an Object can have a particular determination. With the means established so far, we can only say: what there is are Objects, and they have (particular) determinations, yet no account can be given of how they can have determinations. We can thus say that in a sense the Objects have determinations, and in another sense they do not have determinations. Thus, because the determinations are what accounts for the difference between Objects, Objects are different from each other and they are not different from each other. Hegel calls this the “contradiction” internal to the Mechanical Object:

Now since the determinateness of an object lies in an other, there is no determinate diversity separating the two [...] But the objects are at the same time self-subsistent in regard to one another; in that identity, therefore, they remain utterly external.—Thus there arises the contradiction of a perfect indifference of objects to one another and of an identity of determinateness of such objects, or of the objects’ perfect externality in the identity of their determinateness.⁶⁸

We have arrived at a point where a structure of what there is was identified, but where that structure involves a contradiction of sorts. Yet, this contradictory structure captures what there is. For, when we ask why an Object has a certain determination, we are indeed referred to another Object, and then to another Object, and so on. When we ask why a stone is warm, we are referred to the sun, for example. Thus, Hegel holds, we have to acknowledge that contradiction. This acknowledgment of the contradiction of the Mechanical Object is expressed in the terms of the *SL* in the following way.

⁶⁸ *SL*: 633-4/6:413. Cf. *SL*: 635/6:415. For the same contradiction as it shows up in *Life*, cf. *SL*: 678/6:474.

The contradiction gets “posited” and we thereby move from the Mechanical Object to ‘the Mechanical Process’:

The mechanical process is the positing of that which is contained in the concept of mechanism, hence the positing in the first place of a *contradiction*.⁶⁹

This means that we accept that Objects receive their determinations from other Objects, even though the problem of how to account for the unity of an Object and its determinations is thereby not satisfactorily solved. That no proper account can be given for the unity of Objects and their particular determinations finds its real expression in its being a *mere fact* rather than a necessity that a certain Object has a certain determination (that the stone is warm, for example). While by itself philosophically unsatisfying, the mere facticity of Objects’ having the determinations they have, which Hegel takes to be an expression of the contradiction of the Mechanical Object, allows for higher forms to take up mechanistic nature and use it. For example, it is only because it is not a necessity that a river flows in the way it does that human beings can alter its course and use it to run a grist mill or to water fields.

In positing the contradiction of the Mechanical Object, we have posited that there is a way of receiving particular determinations. This way, which we can call a process, is now the topic of philosophical reflection.⁷⁰ That is, we have moved to the next thought, the ‘Mechanical Process’. At the beginning of the Mechanical Object, the Objects are *unified* in their universality. That is, there is unity among all Objects insofar as they are all Objects. As, at that early point in the dialectic, no further specificity is provided to this abstract statement, we can say that this is a “merely abstract unity”. With the Mechanical Process, this merely abstract unity gets more concrete: it is through the processes of

⁶⁹ *SL*: 635/6:415.

⁷⁰ In Kantian terms, the *process* of giving and receiving determinations is expressed thus: there is one substance that is the cause and there is another substance that is the recipient of the effect of that causation.

giving and receiving determinations that Objects are unified. That is, the Mechanical Process states *how* the abstract unity of the Objects is realized.⁷¹ This illustrates how the *SL* is a progression to presuppositions of the thought at hand: the Mechanical Process spells out an unclarified assumption of the Mechanical Object.

Before turning to further details of the Mechanical Process, is it worth discussing a peculiar aspect of Hegel's method in the *SL*. This aspect is Hegel's use of the concepts of "immediacy" and "mediation". The mark of immediacy is the absence of mediation, and mediation is what accounts for the unity of entities: entities are unified by being mediated in one way or the other. For example, at the beginning of the Mechanism chapter, the unity of the Objects was immediate: it was just stated and no account was offered as to how the Objects are unified. The Mechanical Process is the mediation of the Objects and thus states how the Objects can be unified, i.e. how the abstract claim to unity is realized. While there is a significant amount of variety as to how the method of the *SL* works in each part and each chapter, the following very general statement can be made: In each section of the *SL*, the first thought is marked by immediacy, the second one by mediation, and the third one is the unity of the first two. (We will turn to the third thought or step of the Mechanism chapter shortly.) Furthermore, that the first thought or step is one of immediacy can also come into play with respect to a thought that is part of one chapter. In the case of the Mechanical Process, for example, there is an immediate and a mediate form. The first Hegel calls "Formal Mechanical Process" and the second one "Real Mechanical Process".

⁷¹ I thus disagree with Moss, who holds that, in the Mechanical Process, the Objects receive the determination of being 'individual objects.' (2013: 78) Against this account speaks the philological reason that Hegel does not use 'individuality' in the sections on the Mechanical Objects and the Mechanical Process, but only from Absolute Mechanism on. The *singularity* of Objects, however, is already the result of the transition from the Disjunctive Syllogism to Objectivity. Finally, Objects must already be singular in order to be able to receive a determination.

The Mechanical Process in its immediate form is thus one in which the Object and its particular determinations are unified in an immediate way. This means that they are only externally related: the Object has a determination, but this is not a necessity but rather a brute fact. Hegel puts this by saying that the Object is *indifferent* to having that determination—it could also not have it. Nevertheless, the Formal Mechanical Process is the thought of Objects’ passing on and receiving determinations. It is through this process that the Objects are, concretely, unified. This process can, however, equally be considered from the vantage point of the universal rather than the singular Objects. Rather than considering Objects to pass on and receive determinations, we can equally say that the universality of the Objects is realized in particular determinations—‘motion, heat, magnetism, electricity, and the like’—that get ‘distributed’ among the Objects.⁷²

While not all transitions in the *SL* work in the same way, the transition to the Real Mechanical Process now happens in the same fashion as the transition from the Mechanical Object to the Mechanical Process in general: by reflection on the thoughts thought so far. Here this means the following. So far we were thinking of the Formal Mechanical Process as a presupposition of the Mechanical Object. The content of this reflection—that the Formal Mechanical Process is a presupposition and insofar internal to the Mechanical Object—now gets posited. What is thus posited is the following: a particular determination is internal to the Mechanical Object. That is, we are now conceiving of the Objects as having a *specific character*. Interaction among Objects with a specific, internal character—a certain capacity, for example⁷³—is what constitutes the Real Mechanical Process. For the interaction—i.e., the communication of determinations—to be possible, the Objects have to share a certain “sphere”, where the shared sphere is internal to the respective Objects. E.g., in the case of the sun’s heating the stone, the stone is receptive to the sunlight, is able to take it up and become

⁷² *SL*: 636/6:416.

⁷³ Cf. *SL*: 639/6:420.

warm due to it. Sun and stone thus share the sphere of “warmth” or “temperature”. In contrast, the stone will be unfazed by exposure to Beethoven’s ninth, as they do not share a sphere. In this context, Hegel discusses the case of an individual Object’s not having the capacity to receive and use the communicated determination and of the individual Object’s demonstrating its singularity in resisting the communicated universal. He thus talks of the “force” of the universal to overpower the singular Object and of the “violence” when an Object’s individuality is “shattered” by the universal.⁷⁴ The point of this discussion is that it only makes sense to speak of a (universal) determination’s being adequate or inadequate to an Object once we have expanded our conception of an Object in the way described in the Real Mechanical Process. For only then does the Object have a character of its own.

The next (and final) step or thought of the Mechanism chapter occurs when we reflect once more on the thought at hand, the Real Mechanical Process. In the Real Mechanical Process, the determinations as the particularized Universal and the Object as singular are *not external* to each other anymore. This means that the opposition of Singular and Universal, which led to the contradiction of the Mechanical Object, is overcome. In Hegel’s idiom, the contradiction is thereby “sublated”. We can think this sublation in ‘the Center’ and in ‘the Law’, which are the immediate and mediated form of the thought called ‘Absolute Mechanism’. Hegel puts the transition thus:

This immanent reflection is now the objective oneness of the objects, a oneness which is an individual self-subsistence – the *center*. Secondly, the reflection of negativity is the universality which is not a fate standing over against determinateness, but a rational

⁷⁴ Karen Ng sees in this passage only the case of the force of an unjust state or of oppressive mores’ suppressing the individuality of people. (2020: 231) Hegel is, however, talking in more general terms here. Next to the physical cases of too high voltage for a capacitor or of too much weight for a bridge, his description equally covers the overpowering of a murderer by the police or the cancellation of a racist speaker. Not immediately seeing the latter cases may stem from the unfortunate circumstance that the German “Gewalt” cannot be neatly translated into English. For “violence” only captures one aspect of “Gewalt”. In German, “Staatsgewalt” (authority of the state), “Gewaltenteilung” (separation of powers), and “höhere Gewalt” (acts of God), for example, are equally cases of “Gewalt” and not to be translated with “violence”.

fate, immanently determined – a universality that *particularizes itself from within*, the difference that remains at rest and fixed in the unstable particularity of the objects and their process; it is the *law*.⁷⁵

In addition to what I have said in the previous section, I suggest the following as an interpretation of Absolute Mechanism and, thus, of this quote. As laid out in the previous section, the word “absolute” in Absolute Mechanism indicates that the relevant determination does not come from without but from within. This is expressed in solar systems in the fact that the motion of the planets is determined exclusively by reference to factors internal to the solar system. While planets and star(s) are in some sense external to each other, one can say that they are all internal to the Object “solar system”, which is unified by means of gravity, gravity that is sufficiently strong in order to be relevant when determining location and velocity of the planets or moons. Absolute Mechanism is the unity of the Mechanical Object and the Mechanical Process. In its immediate form, this unity of Mechanical Object and Mechanical Process consists in there being an Object that *realizes* the particularized universal of the Mechanical Process. It can even be said: we are now considering the case of there being an Object that simply *is* the particularized universal. This Object is ‘the Center’. In a solar system, the star at the centre constitutes the sphere in which the planets move. The star does so due to its mass and the corresponding gravitation: It is gravity that unifies the planets with the star and with one another. The shared sphere of these celestial bodies is materialized, as it were, in the star.

The immediacy of the Center gives rise to the question how, in what way, the Center unifies the planets.⁷⁶ This question gets answered by there being a *Law* according to which the peripheral Objects are determined. In the case of solar systems, as mentioned above, this Law consists of Kepler’s laws

⁷⁵ *SL*: 640/6:422; translation amended.

⁷⁶ For simplicity’s sake, I leave out the case of moons.

of planetary motion. The Law contains a particular way in which the particular peripheral Objects are determined. Hegel thus speaks of the Law as ‘a universality that *particularizes itself from within*’.

As mentioned above, the *reality* of the Law that governs planets lies in the star, which is the active force, as it were, that realizes the Law. With Absolute Mechanism we have thereby arrived at a thought in which universal and singular, mediated by the particular (determinations), form an “intimate unity”. Furthermore, Absolute Mechanism contains a positive, albeit rudimentary, conception of freedom.

This run through the Mechanism chapter of the *SL* can figure as a concrete example of Hegel’s method in that book. Hegel begins with an account of objectivity as being populated by externally determined Objects. This account also underlies predeterminism.⁷⁷ Consequently, this world-view is “thought through”. By scrutinizing this account, Hegel develops the thought of Absolute Mechanism, in which external determination is sublated in the internal determination expressed by the Law. This internal determination finds a helpful illustration in the fact that, according to Hegel, planetary motion is internal to what a planet is: what it means to be a planet is to move in the way stated by Kepler’s laws.

Central to my interpretation is that the progressions in the *SL* occur due to reflection on the thought at hand. For example, through reflection on the singularity of Objects is it established that Objects have particular determinations. And it is through reflection on what was thought so far that the contradiction of the Mechanical Object and the externality of the Universal to the Object get sublated. It is in such ways, I submit, that the transitions of the *SL* work—and not by presupposing a conception of consciousness, self-knowledge, or of complete explanation⁷⁸, as the interpreters discussed in the previous hold.⁷⁹

⁷⁷ What I call ‘predeterminism’, Hegel calls ‘determinism.’ (*SL*: 633/6:412-3.)

⁷⁸ Cf. Kreines 2015: 221.

⁷⁹ It goes beyond the scope of this chapter and dissertation to show that also the transitions in other parts of the *SL* work in that way. To sketch at least one further such transition: the transition from Being to Nothing occurs due to

If this construal of Hegel's method in the *SL* is roughly on the right track, then the following can be said by way of comparison to Kant. Kant and Hegel share that they seek to unfold the presuppositions of the position they argue against. For example, Kant argues against the empiricists by asking "How is empirical knowledge possible in the first place?"⁸⁰ Reflecting on the presuppositions of predeterminism, Kant uncovers a contradiction in these presuppositions. I argued that and how Hegel follows Kant in this assessment. Yet, while Kant reflects on the presuppositions of predeterminism by focusing on the presuppositions of experience, including its temporality, Hegel radicalizes Kant's method by shedding the intuitive and thus "given" moments of spatiality and temporality that are central to Kant's account of cognition.⁸¹ As a result, Hegel argues against the predeterminist in a more purified form, as it were, by reflecting on the relation between the Singularity of Objects, their Universality, and the Particularity that is needed to account for the Singularity of Objects. In this way, Hegel takes the freedom-denying position of predeterminism and by scrutinizing it develops a positive account of freedom which is paradigmatically realized in solar systems.

Conclusion: Unconditional Causes

I want to close by tying together the worked out account of the freedom of solar systems with Kant's terminology of an 'uncaused cause' and with an established account of Hegel's conception of freedom from the secondary literature. In Kant's Third Antinomy, the only way that was on offer in order to construe freedom was in terms of an uncaused cause. In his 'Naturalness and Mindedness – Hegel's Compatibilism', Robert Pippin explains the intricacies of Hegel's notion of freedom as they

reflection on what Being actually contains: Nothing. And it is reflection on the transition from Being to Nothing that yields that Being *became* Nothing.

⁸⁰ Cf. A112 and *CPrR*, 183/53 for how empiricism cannot account for objective experience. Cf. B194-5/A155-6; B764-5/A736-7; Bxix for the centrality to Kant's critical philosophy of the question how experience is possible.

⁸¹ For a detailed discussion of this radicalization, cf. McDowell 2007.

emerge from the suggestive phrase that ‘Geist is a product of itself, only what it takes itself to be’.⁸² Pippin considers it a virtue of his approach that he simply bypasses classical formulations of the problem of free will. He writes:

Since I do not need to be able to think of myself as an uncaused cause in order to qualify as a free subject, I do not need to establish, either metaphysically or as a practical condition, any realm exempt from strict determination according to the laws of nature (whether or not subsumption under causal law is the *Ur-Prinzip* of nature).⁸³

I think that the case of solar systems is also helpful here. While I agree with Pippin’s focus on freedom’s being an active state of mutual recognition with other people and recognizing oneself in that, I do think that we need to understand *in what way* we can conceive of ourselves as an uncaused cause in order to make our freedom as agents in the world fully transparent. Our freedom does not, of course, consist in our possession and use of a randomly exercised, miraculous capacity for interrupting the unity of nature. Rather, we can act according to our comprehension of things and by adopting principles of action, such as the moral law. It is helpful to consider solar systems in order to understand how freedom thus construed is possible insofar as a solar system does not violate the unity of nature, but is a system such that the principle of its motion does not lie outside of it, but is internal to it. If we *restrict* our concept of causation to *external* causation, then solar systems are a case of an *uncaused cause*. Yet, solar systems are not problematic. Thus, they show us how the term ‘uncaused cause’ can be understood in an unproblematic way.

Solar systems are of course different from human beings and the freedom exhibited by solar systems is different from the full-blown conception of freedom possible in the realm of spirit in many

⁸² Pippin 1999: 203.

⁸³ Pippin 1999: 194-5.

respects. For example, qua inanimate objects, solar systems are not alive, they do not have the possibility of deviating from the laws that govern them, and they are not even possibly conscious of these laws. Thus, forms of mindedness such as recognition, the possibility of and at times need for novelty and creativity, or the ability to subsume objects under concepts are absent. These differences notwithstanding, Hegel's usage of the term "free" in relation to solar systems can be taken at face value if we allow for different forms of freedom.

Before closing this chapter, I want to address the question in what way these different forms of freedom relate to each other. The highest forms of freedom only pertain to human beings.⁸⁴ Yet, in certain respects, also lower forms of being can be called free. I suggested that solar systems exhibit freedom insofar as they exhibit the following three aspects: 1) absence of determination from without, 2) determination through an internal principle, an internal principle that 3) is a Law that is not external to the Objects it governs, but fully suffuses them and thus 'is the pervading immanent essence of the objects'. These aspects do not constitute external marks that some objects happen to have and others do not, and where everything that is to be subsumed under the concept "free" has these marks in the same way. In the terminology of Christian Martin's essay 'Four Types of Conceptual Generality', the concept of freedom does not have "generic generality".⁸⁵ Rather, the rudimentary exposition of freedom in terms of these three aspects can be taken to be present, in a transformed way, in *organisms* insofar as the activity of organisms is not determined from without, but from within, through an internal principle—the life-form, as Michael Thompson calls it.⁸⁶ Furthermore, the universal articulated by that life-form does not stand in an external, subsumptive relation to the organisms or organs it pertains to, but by being their "immanent essence". In Hegel's terminology, the freedom of

⁸⁴ The highest form of freedom may even involve, constitutively, to grasp what Hegel calls "the Absolute Idea". I discuss this briefly at the end of the Conclusion to this dissertation.

⁸⁵ Cf. Martin 2015.

⁸⁶ Cf. Thompson 1995.

solar systems is *sublated* in the “freedom of Life”, as we could call it. A decisive difference between solar systems and organisms is that the internal principle of organisms involves *nourishment* and *reproduction*. This comes out clearest in the case of animals, which pursue nourishment and reproduction by an *attentive awareness* and *engagement* with their surroundings.⁸⁷ This attentive awareness and engagement means that animals have a (non-rational) mind and that there is a certain *distance* between an animal’s mind and the surroundings. This distance, so Hegel, is a crucial distinction between animals and solar systems. I touched on this distinction above, when I discussed why Hegel does not use the term “self-determination” in relation to solar systems. There, I wrote that what Absolute Mechanism lacks in order to exhibit proper self-determination and concrete universality is a certain negativity or *opposition* of Concept to Objectivity. This opposition is present in Life—both in the “distance” between the animal’s mind and its surroundings and in the fact that organisms can instantiate their universal *well* or *not so well*. It is thus that aspects 2) and 3) are present in Life in a transformed way. Regarding aspect 1), we can say the following. Solar systems are at the mercy of their surroundings for their higher form of determination to persist—a huge meteor might hit a planet or the whole solar system could be consumed by a black hole. While this is also the case for organisms, it is part of Life’s internal principle to perpetuate its existence: Life *seeks* to remain in existence. In this way, the three aspects of freedom present in solar systems are present in Life in a transformed way. In Hegel’s idiom, the three aspects are *sublated* in Life. Thus, Life exhibits a higher form of freedom than solar systems.

The three aspects of freedom exhibited by solar systems are yet again sublated and present in *human*, i.e., *rational* mindedness insofar as the internal principle now involves a *conscious* and *conceptual*

⁸⁷ In his talk ‘Vegetation and Individuation’, Matthias Haase argues that with respect to logical form (in Hegel’s sense of that term) animals are the paradigmatic form of life. In the context of my discussion here this is relevant insofar as animals are relating to their environment with awareness and thus exhibit a mental distance to their environment, whereas plants seem not to do that.

opposition of mind to world, as well as the ways of theoretical and practical cognition to *overcome* this opposition.⁸⁸ Contrary to animals, human beings can be aware of the internal principle that governs them and have their *understanding* inform that principle. That is, we can wonder how to live and then have such a reflection inform our life. More generally, human beings can *cognize* what there is—including themselves, and including the activity of cognition. Thus, the human being is a self-determining being. The *autonomy* of cognition—cognition, when successful, is determined by the internal standard of truth and *not* by any *outside factors*—elevates *human freedom* above the one present in Life.

In this way, I submit, freedom is present in solar systems, but also—in a sublated way—in higher forms of being such as organisms and human beings. The conceptual generality of freedom is thus not one of a “highest common factor”.⁸⁹ For, the three aspects of freedom I have identified get *transformed* as we move up the “Stufenleiter” to organisms and human beings. Thus, I want to suggest that—similar to Aristotle’s conception of ψυχή—for Hegel, freedom exhibits a kind of generality that Martin calls “serial generality”. And while I agree with Pippin that the more interesting determinations of freedom are to be achieved by leaving the “problem of free will” aside,⁹⁰ understanding the way in which solar systems are not to be described in terms of external causation—and can thus be called free—is illuminating for understanding our freedom.

⁸⁸ In Life, the opposition between mind and surroundings is overcome by means of the animal’s *drives*.

⁸⁹ For the perils of too quickly assuming that conceptual generality must be one of a “highest common factor”, cf. Conant 2016 and Miguens 2020: 413-416, 444, 462-463, 466, 617-626, 657-660, 685-689, 703-706, 738-743, 749-750, 819, 825, 841, 864-865, 919-929, 943-944, 950.

⁹⁰ Furthermore, studying these more interesting determinations of freedom can also help to get into view that *rational determination* has a radically different logical form than external determination/causation. Such a study can thus make one recognize that conceiving of rational activity as determined by external causation makes as much sense as conceiving of musical notes as weighed by scales—if only the scales are precise enough.

Conclusion

In this dissertation, I pursued the lead that we can get *true metaphysics* into view by determining what Transcendental Realism is—so as to see clearly what true metaphysics is *not*. Put in a Socratic vein, the thought is that determining Transcendental Realism helps us to answer the question “Of all those metaphysicians, who is truly a metaphysician?” I hence want to close this dissertation by drawing together the determinations made in this dissertation about what Transcendental Realism is, in order to then state what I take to be Kant’s and Hegel’s answer to the metaphysical question “What is nature?”. The latter part of this conclusion involves a comparison to Wilfrid Sellars’ conception of nature as well as a comparison between the ways in which Kant and Hegel arrive at their conception of nature, i.e., a comparison between their respective *philosophical method*.

A fruitful approach to Kant’s philosophy consists in determining what he means by Transcendental Realism, the philosophical stance that “almost all” of his predecessors adopt.¹ Yet, it is not easy to pin down what exactly Transcendental Realism is. While there are only two passages in the *Critique of Pure Reason* where Kant tells us what Transcendental Realism is, the issue is present throughout the work. For, Kant contrasts his way of thinking, Transcendental Idealism, with Transcendental Realism. And the *Critique of Pure Reason* is a sustained argument for Transcendental Idealism—from the “direct proof” of Transcendental Idealism in the Transcendental Aesthetic through the “indirect proof” of Transcendental Idealism in the Antinomy of Reason² to Kant’s account of ideas in the Appendix to the Transcendental Dialectic and his account of philosophical method in the Transcendental Doctrine of Method.³ This, I think, justifies the centrality I assign to

¹ Cf. *CPtR*, V:53.

² Cf. B534/A506.

³ Kant’s method would not work if Transcendental Idealism were not true.

the concept of transcendental Realism. I furthermore hope that the arguments⁴ made in this dissertation—against Strawson and Watkins, against Stang’s and Proops’ construal of the Antinomies of Reason, against McLaughlin’s and Allison’s construal of the Antinomy about Organisms, and my positive accounts of the respective topics—have shown the fruitfulness of my focusing on the contrast to Transcendental Realism.

In order to give a summary account of Transcendental Realism, I want to start with the two passages from the *CPR* just mentioned in which Kant defines⁵ Transcendental Realism. In the first of these passages, Kant states:

To [transcendental] idealism is opposed **transcendental realism**, which regards space and time as something given in themselves (independent of our sensibility). The transcendental realist therefore represents outer appearances (if their reality is conceded) as things in themselves, which would exist independently of us and our sensibility and thus would also be outside us according to pure concepts of the understanding.⁶

In the second passage, Kant repeats the point made here in the second sentence, that the “realist in transcendental meaning” turns *appearances* into “things subsisting in themselves” and thus into “things [Sachen] in themselves”.⁷ If we understand appearances as *spatio-temporal objects*, as I think we should, then Transcendental Realism seems to be primarily a doctrine about space and time.

⁴ I don’t mean to employ a restrictive sense of “argument” here, where one does nothing but deductively following through the implications of given premises. Philosophical arguments in a wide sense include, I would say, making somebody aware of their employing a certain way of thinking and showing somebody how things can be construed differently. The latter can, then, also involve their coming to learn new forms of argument. (Making somebody aware of their having fallen prey to the *Myth of the Given* or their thinking’s being informed by a *sharp force-content distinction* can then, for that person, suffice to consider a position refuted.)

⁵ Equally as “argument” need not be understood in a restrictive sense, so “definition” and “define” need not be understood in a restrictive sense as it only applies to mathematical definitions. The flexibility I employ here is in line with the Wittgensteinian injunction “Use your words in whatever way you want, as long as you don’t confuse yourself!” (This is James Conant’s rendition of a line from §79 of the *Philosophical Investigations*.)

⁶ A369.

⁷ B519/A491.

This determination of Transcendental Realism may seem to be in tension with the account of Transcendental Realism that I developed in chapter 1. According to that account, Transcendental Realism and Idealism are *conceptions of transcendental cognition*. In order to see why there is in fact no tension, consider how the determination of Transcendental Realism as a doctrine about space and time can be developed so that it can address Kant's account of *ideas*, in Kant's technical sense of the term as concepts that *guide* us in experience.

The idea at the center of this dissertation is *the idea of nature*, i.e., the concept of the totality of spatio-temporal objects. Now, per Transcendental Idealism, space and time are the forms of our intuition. Thus, insofar as the primary objects of theoretical cognition are essentially spatio-temporal, these objects are mind-“dependent”: insofar as space and time are the forms of our intuition do these objects have to be understood as *in unity* with our minds. This does not mean that these objects are mind-dependent with respect to their existence. Exactly not. Yet, if the primary objects of our theoretical cognition are essentially objects of our sensibility, then we *perceive* them. Thus, we can take them in only successively. (Kant writes of “successive synthesis”, for example, when discussing the First Antinomy.⁸) This point goes hand in hand with Kant's *two-stem doctrine*, according to which *reality* has to enter our mind through the senses: only of perceived objects⁹ can we claim that they exist and have reality. This is so because space and time by themselves do not have objective reality—they are merely the forms of our sensibility. The primary objects of theoretical cognition thus have to *appear* to a finite cognizer in order to be objects of cognition: they are *appearances*. Now, the concept of all appearances taken together includes those appearances we have *not yet* perceived or properly cognized. We thus cannot claim that the object of this concept exists, that it has reality—at least not in the same

⁸ B454/A426.

⁹ It is not the case that I personally must have perceived each individual object of which I can claim existence. It suffices if somebody has perceived it—be it directly or indirectly. (Cf. B273/A226 for Kant's statement that we can indirectly perceive magnetic matter.)

way as the direct objects of theoretical cognition have reality. Kant thus says that the concept of the unity of all appearances, i.e., the concept of nature, has objective reality only in an *indeterminate* and *indirect* way.¹⁰ Nevertheless, this concept *guides* us in our experience. That is, this concept is an *idea*, in Kant's sense of the term. In this way, Kant's conception of nature as an idea can be derived from his conception of space and time.

The transcendental realist does not acknowledge that concepts of a *totality*, such as the concept of nature, are ideas. Rather, she takes such concepts to have objective reality in the way in which the direct objects of theoretical cognition have reality. Nature is thus conceived of by the transcendental realist as a totality existing in itself. Conceived of in this way, nature does not essentially involve a successive synthesis or regress, which gives rise to the Antinomies of Reason. Kant thus writes that we overcome the Antinomy when we overcome Transcendental Realism and acknowledge that...

...the series of causes ordered one above another, or of conditioned existence up to necessary existence ... as series of subordinated representations, ... exist only in the dynamical regress; but prior to this regress, and as a series of things subsisting for themselves, they cannot exist at all in themselves.

Accordingly, the antinomy of pure reason in its cosmological ideas is removed by showing that it is merely dialectical and a conflict due to an illusion arising from the fact that one has applied the idea of absolute totality, which is valid only as a condition of things in themselves, to appearances that exist only in representation, and that, if they constitute a series, exist in the successive regress but otherwise do not exist at all.¹¹

¹⁰ B691-4/A663-6.

¹¹ B533-4/A505-6.

Because the concept of nature as conceived of by the transcendental realist gives rise to the Antinomies of Reason, the Antinomies are an “indirect proof” of Transcendental Idealism.¹²

We have thus arrived at two determinations of Transcendental Realism. For one, the transcendental realist “regards space and time as something given in themselves (independent of our sensibility)”. And then, the transcendental realist conceives of ideas not as ideas but as “absolute totalities” that exists in themselves, independently of our capacity for cognition. This invites the following question. What do these two determinations of Transcendental Realism have in common? I suggested, in chapter 2, that the transcendental realist misconceives of *formal concepts*. She construes them as if they were empirical, materially saturated concepts. The concept of nature merely guides us in experience, yet this guidance is necessary, and it does not directly have objective reality. These determinations allow us to consider this concept to be a formal concept. That space and time are, for Kant, formal concepts needs no further argumentation. That the transcendental realist mistakes formal concepts for material ones is expressed by Kant in the following way. Both ideas and the forms of intuition are naturally mistaken for actual objects, as Kant writes in this passage, where he discusses a specific idea, the Transcendental Ideal:

...at the same time it is unavoidable, by means of a transcendental subreption, to represent this formal principle to oneself as constitutive, and to think of this unity hypostatically. For, just as with space, since it originally makes possible all forms which are merely limitations of it, even though it is only a principle of sensibility, it is necessarily held to be a Something subsisting in itself with absolute necessity and an *a priori* object given in itself, so it also comes about entirely naturally that since the systematic unity of

¹² Cf. B534-5/A506-7. Esp.: “The proof would consist in this dilemma. If the world is a whole existing in itself, then it is either finite or infinite. Now the first as well as the second alternative is false (according to the proof offered above for the antithesis on the one side and the thesis on the other). Thus it is also false that the world (the sum total of all appearances) is a whole existing in itself.”

nature cannot be set up as a principle of the empirical use of reason except on the basis of the idea of a most real being as the supreme cause, this idea is thereby represented as an actual object, and this object again, because it is the supreme condition, is represented as necessary, so that a **regulative** principle is transformed into a **constitutive** one...¹³

We can thus say that the transcendental realist conceives of space, time, and ideas as things existing in themselves, which can be equally expressed by saying that she mistakes formal concepts for concepts of actually existing things, i.e., for material, empirical concepts.

At the beginning of chapter 1, I asked the following questions: Why are Transcendental Idealism and Realism called that way? Why “transcendental”? Why “idealism” and “realism”? I suggested to answer the question “Why ‘transcendental?’” by relating it to Kant’s concept of *transcendental cognition*. Transcendental cognition is the kind of cognition we acquire through the Critical Philosophy. Insofar as the Critical Philosophy provides us with cognition of our capacity for cognition—in contrast to material, empirical cognition—the cognition thus acquired can be considered *formal cognition* or ‘cognition of the *form* of empirical cognition’. I suggested that Transcendental Realism acquires its name because the transcendental realist conceives of transcendental cognition as if it had reality—in the way in which empirical cognition has reality. The transcendental idealist, on the contrary, holds that reality can enter our mind only through the senses and that transcendental cognition is not empirical cognition; because it is not cognition of external objects but rather cognition of ourselves qua knowers. Transcendental cognition is a kind of self-knowledge. Thus, transcendental cognition does not have objective reality, but rather is “purely intellectual” cognition.¹⁴ The discussion of Transcendental Realism in this and the previous paragraphs thus shows that my claim that

¹³ B647-8/A619-20; my underlining.

¹⁴ Cf. chapter 1 of this dissertation, pp.15-24.

Transcendental Realism is a conception of transcendental cognition is *not in tension* with Kant's statements about Transcendental Realism as a conception of space and time. Rather, my claim *explains* these statements.

If transcendental cognition is purely intellectual self-knowledge, then the mistake of the transcendental realist consists in her taking aspects of our mind and to conceive of them as if they were separately existing entities. It seems plausible to me that it is “natural” and—in some sense—unavoidable to begin to conceptualize the human mind by trying to conceive of the human mind as if it were one of the primary objects of our theoretical cognition: an external, spatio-temporal object. My suggestion to conceive of Transcendental Idealism and Realism as conceptions of transcendental cognition can thus make sense of Kant's claims that the transcendental subreption and the consequent transcendental illusion—as discussed in the Transcendental Dialectic of the *Critique of Pure Reason*—is ‘natural’ and ‘unavoidable’.¹⁵ (I also argued, in chapter 3, that Kant's writing of a “natural dialectic” and “unavoidable illusion” in the context of the Dialectic of the Teleological Power of Judgment¹⁶ is to be understood along the same lines, as occurring due to our naturally first adopting Transcendental Realism when doing metaphysics.)

Furthermore, this claim regarding Transcendental Realism—that the transcendental realist conceives of aspects of our mind as if they were separately existing objects—connects to other diagnoses about prevalent mistakes in philosophy more generally. The diagnoses I have in mind here are, for one, James Conant's diagnosis and critique of the “layer-cake conception of the human mindedness”,¹⁷ and, then, Matthew Boyle's diagnosis and critique of “additive theories of rationality”.¹⁸ In both, a the tendency to conceive of unified aspects of the mind as separate(ly intelligible) are

¹⁵ Cf. A387-8; B353-4/A297-8; B397/A339; B433-4/A407; B449/A422; B647/A619; B660/A582; B672/A644.

¹⁶ *CPJ*, §70, V:386.

¹⁷ Cf. Conant 2016; Miguens 2020: 627-8, 643-6, 932.

¹⁸ Cf. Boyle 2016.

diagnosed and critiqued. This is also something that, on my reading, the transcendental realist does: she theorizes about aspects of the human mind as if they were external objects. My claim regarding Transcendental Realism also allows for a connection to John McDowell's diagnosis and critique of a "view from sideways-on".¹⁹ The transcendental realist assumes such a view insofar as she conceives of concepts that describe the form of the human mind along the lines of concepts of external objects. She thus takes an *external perspective* onto the human mind and its activity, which is what a philosopher does who occupies a "view from sideways-on" in McDowell's sense.

Since its inception, Transcendental Idealism is tied to the debate about how to understand the term "thing in itself". While this debate is not the central topic of this dissertation, I addressed it throughout chapters one to three, especially at the end of chapter 2. I suggested the following. There are passages in which Kant says that the thing in itself is the object of a *purely rational*, i.e., *intellectual*, *cognition*. Now, if *transcendental cognition* is purely intellectual cognition, then we can take "thing in itself" to be the object of transcendental cognition. This explains claims on Kant's part to the necessity of a thing in itself that "underlies" appearances:²⁰ if we want to philosophically conceptualize appearances, then we have to do transcendental philosophy. The object of transcendental philosophy is (the form of) the human mind insofar as it cognizes appearances. And the human mind is to be described by concepts such as sensibility, understanding, intuition, judgment, categories, synthesis, transcendental objects, idea, &c. Because things in themselves are not empirical and thus external objects, the cognition of them is not empirical. This can explain Kant's claims that, in transcendental philosophy, there are no opinions and hypotheses²¹ and every question is capable of a full answer.²² Insofar as every question in transcendental philosophy is capable of a full answer, we can take the objects of

¹⁹ Cf. McDowell 1996: 34-5, 42.

²⁰ Cf. Bxxvi-xxvii, B565/A537, B522-3/A494-5.

²¹ Cf. B797/A769 ff.; Axv.

²² Cf. B504-5/A476-7; Bxxiii; Axii ff..

transcendental philosophy to be “fully determinate”. This explains Kant’s claims, discussed above on pp.208-210, that the transcendental realist mistakes nature to be a thing “fully determinate by itself”. Only the objects of transcendental cognition are fully determinate, external objects are never—not even the concept of the totality of external objects.

In the same way, light can be shed on the following statement that Kant makes about Hume: “When Hume took objects of experience as things in themselves (*as is done almost everywhere*) he was quite correct in declaring the concept of cause to be deceptive and a false illusion”.²³ I suggest to read this quote as saying: When the objects of empirical cognition are mistaken for the objects of transcendental cognition, *we lose both kinds of cognition*. For, what underlies that Hume—and almost everyone(!)—takes objects of experience to be things in themselves is a misconception of transcendental cognition. Hume does not have the *formality* of transcendental concepts, such as ‘cause’, in view. As a good empiricist, Hume theorizes about the formal concept of causality as if it were an empirical concept. He misses that the concept of causality is a formal concept and thus pertains to the human mind, that it belongs to an exposition of the human mind. When such concepts as causality are recognized to be formal concepts, then they stand in need of matter, matter that must be given through the senses. This is why the primary objects to which formal concepts such as ‘cause’ pertain are appearances. In this way, Hume misses the formality of concepts such as ‘cause’, i.e., the categories. By missing this formality, it is inevitable for Hume to draw the conclusion that the concept of causality is “deceptive and a false illusion.” If a thinker is to reason along Hume’s line, i.e., along the line of Transcendental Realism, then this conclusion is inevitable not only for causality, but for all categories. The result is that one cannot make sense of empirical cognition. Consequently, one loses empirical cognition, which is why Kant writes of “the unavoidable consequence of empiricism, namely

²³ *CPtR*, V:53; my italics.

skepticism”.²⁴ That is, by the same token—Transcendental Realism—Hume loses transcendental as well as empirical cognition.

This diagnosis of a central mistake of Hume’s leads to the penultimate determination of Transcendental Realism I want to make. The fact that the transcendental realist misconstrues the formal cognition that transcendental cognition is also amounts to *a problematic separation of metaphysics and epistemology*. (I touched on this topic in chapter 1 when discussing Watkins.) Arguably, transcendental philosophy is what Kant considers to be “true metaphysics”.²⁵ Now, to be sure, not every branch of epistemology is relevant for (true) metaphysics. Yet, the attempt to excise all epistemology amounts to transcendental realism insofar as the *formal unity of mind and empirical objects* is lost out of sight when even very *basic epistemological questions* are considered as not belonging to metaphysics. The very basic epistemological questions I have in mind here are the question “How is cognition of external objects possible?” and surrounding questions. It is one thing to do metaphysics without having such questions in mind. Arguably, this is what Aristotle does. But it is another thing to *positively excise* such a question, i.e., to be on the guard for such questions and taking it as a guiding principle that such questions do not belong to metaphysics. Arguably, this is what Hume did. He did this, for example, when he declared explanations to be disappointing should they lead to the human mind.²⁶ In this way, Transcendental Realism leads to a problematic separation of metaphysics and epistemology.

Finally, Transcendental Realism amounts to *dogmatism*. The question “How can a concept be available to me?” can easily be considered a “merely epistemological” question. If that is done, then

²⁴ Ibid.

²⁵ Both in the A- and B-preface does Kant state that the *Critique of Pure Reason* is supposed to make a positive, good conception of metaphysics available to us. Cf. *MFNS*, Preface, IV:472; B786/A758; B316-8/A260-2; VIII:160. The last passage cited here is particularly interesting. Kant states there that in *metaphysics* we demand—correctly—that the *right* of theoretical-speculative reason to do science be justified and that reason’s pretension to decide anything be *justified*. In order for this to happen, Kant says, reason has to uncover the state of its faculties or powers *completely*.

²⁶ Cf. *Treatise* 1.4.7.5.

no problem is seen in using concepts without a critical reflexion onto that concept's "transcendental place".²⁷ Equally, if metaphysical concepts are misconstrued as concepts of external objects, then the former are as much *given* as the latter. Why is there Kentucky blue grass? Why are there red-breasted nut-hatches? In that specificity, these questions do not have an answer. It is simply a given that exactly these species exist. Similarly, it does not make sense to justify metaphysical concepts if these concepts are modeled on empirical concepts. In this way, I submit, Transcendental Realism goes hand in hand with dogmatism.

Overall, the discussion on the last pages amounts to the following determinations of Transcendental Realism:

- 1) *Space* and *time* are regarded "as something given in themselves (independent of our sensibility)".
- 2) *Appearances*, i.e., spatio-temporal objects, are taken to be *things in themselves*.
- 3) *Ideas* are regarded as having *objective reality* in a *direct* and *determinate* way, which is the way in which material, i.e., empirical, concepts have objective reality.
- 4) *Formal concepts* are misconstrued as empirical, material concepts.
- 5) *Transcendental cognition* is misconstrued as theoretical, empirical cognition.
- 6) An *external viewpoint* on the human mind, and thus the objects of transcendental cognition, is assumed. (A "view from sideways-on.")
- 7) Metaphysics is *sharply separated* from epistemology.
- 8) *Dogmatism*: metaphysical concepts are not considered to be capable of justification.

I do not want to claim that every philosopher who is a transcendental realist in one of these respects also endorses all of these other claims. My suggestion is merely that one of these claims leads

²⁷ B324/A268.

naturally to the other ones. But given that what I am doing here is an attempt at an anatomy of a profound *mistake* in philosophy, it should not be assumed that Transcendental Realism can be endorsed without any intimation of a “pressure” in the opposite direction, i.e., in the direction of Transcendental Idealism.

Having thus determined Transcendental Realism, I want to transition to the question “What is nature?” by considering a striking example of a contemporary philosopher’s construal of a formal concept along the lines of a concept that denotes an external object. The following passage is from the “extended essay” on space and time in “The Blackwell Companion to Metaphysics”. In the passage, McTaggart’s conception of a “B-series” is explained in the following way. McTaggart’s...

...thought on these matters can be made more understandable by presenting it with the help of a metaphor. He begins by supposing that the whole of history is laid out in a block comprising the B-series. He notes that in such a series, there is no change and therefore no time, all events simply sitting there alongside one another on the B-axis.²⁸

While it is mentioned that this is only a metaphor, the author subsequently lays out the landscape of metaphysical positions regarding time in such a way that there is no tension between the position of “eternalists” about time and this metaphor. Furthermore, given that the formal concept ‘time’ is here conceived of as if time were an external object—“laid out in a block”—I am tempted to assume that this metaphor is actually an *image* or *picture* that centrally informs the author’s thinking, and maybe the thinking of “eternalists” more generally. That the formal concept of time is conceived of as if it were an external object amounts to Transcendental Realism. This is an indication that what Kant calls Transcendental Realism is present in contemporary philosophy insofar as contemporary thinking is guided by images or pictures that inform such thinking in a transcendently realistic way. A further

²⁸ Van Cleve 2009: 78.

case where one can with some plausibility assume that a similar, transcendently realistic picture underlies contemporary philosophical thinking is David Lewis' image of the universe as a "mosaic":

...all there is to the world is a vast mosaic of local matters of particular fact, just one little thing and then another. [...] For short: we have an arrangement of qualities. [...] All else supervenes on that.²⁹

Also here, a formal concept—the world³⁰—is conceived of as if it denoted an external object. I am thus tempted to also assume in this case that a certain picture is underlying the thinking at hand, a picture which makes that thinking one that Kant would describe as informed by Transcendental Realism.

When employing a certain, Aristotelian way of thinking, one may be tempted to assume that *error* or *falsity* has *no unifying principle* and that hence there *cannot* be any *unity* to *Transcendental Realism*. I hope that what I wrote so far in this conclusion suffices to put such reasoning into doubt. This is even more so the case if the two pictures just discussed can be considered as present-day continuations of Transcendental Realism. For, then there is also a temporal constancy to Transcendental Realism.³¹ (To say that there is a *certain* unity to Transcendental Realism does *not* mean that Transcendental Realism is a *thoroughly coherent* position. Kant's discussion of space and time in the Transcendental Aesthetic is supposed to make us *see* that a transcendently realistic account of space and time is wrong; and the Antinomies of Reason point out a *contradiction* within Transcendental Realism.)

Yet, if we can conceive of the just discussed two ways of thinking as informed by a certain *image* or *picture*, then we can wonder whether there are also different, and maybe less problematic cases

²⁹ Lewis 1986: ix–x.

³⁰ Recall that for the purposes of this dissertation, I used 'world', 'nature', and 'universe' interchangeably.

³¹ This temporal constancy could also be seen as extending back in time, to thinkers that only accepted concepts of material objects and no formal concepts. I am here thinking of atomists such as Democritus and Leucippus.

where philosophical thinking is informed by an image or picture. I want to suggest that we find such a case in Wilfrid Sellars' essay 'Philosophy and the Scientific Image of Man', an essay that I also want to use as a starting point for the final topic of this conclusion. This final topic is the overarching question of this dissertation, the question "What is nature?". In the two ways of thinking discussed in the paragraph before the previous one, the respective thinkers would probably not accept the description that their thinking is guided by a picture. This is different in the case of Sellars' essay. In this essay, Sellars consciously endorses the idea that our thinking about the world, or nature, is ultimately *guided* and *unified* by two "images": the manifest image or/and the scientific image. The manifest image is a conception of nature as populated by everyday objects, whereas the scientific image is a conception of nature as, at bottom, populated by the objects of physics. Thus, I submit, there are two conceptions of nature for Sellars, i.e., two different answers to the question "What is nature?". What is striking is that Sellars refers to these conceptions as *images*. About the term 'image', in the way he uses it, Sellars writes:

The term 'image' is usefully ambiguous. On the one hand it suggests the contrast between an object, e.g. a tree, and a projection of the object on a plane, or its shadow on a wall. In this sense, an image is as much an existent as the object imaged, though, of course, it has a dependent status.

In the other sense, an 'image' is something imagined, and that which is imagined may well not exist, although the imagining of it does – in which case we can speak of the image as *merely* imaginary or unreal. But the imagined *can* exist; as when one imagines that someone is dancing in the next room, and someone is.³²

³² Sellars 1963: 5.

Images thus stand at a remove of actually existing objects—at least in the first instance. But the imagined also *can* exist. The latter is important for how Sellars thinks about the scientific image. Before turning to the scientific image, however, we should determine the manifest image a bit more. The manifest image is a unification of ordinary, middle-sized objects—chairs, trees, people, planets—and this unification does come about through scientific means. Sellars says as much in the following quote.

[T]he conceptual framework which I am calling the manifest image is, in an appropriate sense, itself a scientific image. It is not only disciplined and critical; it also makes use of those aspects of scientific method which might be lumped together under the heading ‘correlational induction’. There is, however, one type of scientific reasoning which it, by stipulation, does *not* include, namely that which involves the postulation of imperceptible entities, and principles pertaining to them, to explain the behaviour of perceptible things.³³

The manifest image is scientific. Yet, it is an image. In Kant’s terms, it thus essentially contains a sensible, i.e., non-conceptual, component.

What the manifest image does not involve is the postulation of imperceptible entities in order to explain the behavior of perceptible things. The latter is what we do when we adopt the *scientific image*. The endeavor of explaining visible behavior Sellars calls “behaviouristics”. Regarding the relation of behaviouristics about human behavior to neurophysiology, i.e., a physics of the brain, Sellars writes that “no behaviourist would deny that the correlations he seeks and establishes are in some sense the counterparts of neurophysiological, and, consequently, biochemical connections”.³⁴ He furthermore writes that...

³³ Sellars 1963: 7.

³⁴ Sellars 1963: 25.

...although behaviouristics and neurophysiology remain distinctive sciences, the correlational content of behaviouristics points to a structure of postulated processes and principles which telescope together with those of neurophysiological theory, with all the consequences which this entails. On this assumption, if we trace out these consequences, the scientific image of man turns out to be that of a complex physical system.³⁵

Neurophysiology is thus a paradigmatic component of the scientific image. The entities it postulates are imaginary, but can be real. And, when thinking along the lines of the scientific image, we take these postulated entities to be real. Hence, “the scientific image of man turns out to be that of a complex physical system.”

With these points in mind, we can venture to lay out how Sellars, in that essay, answers the question “What is nature?”. For Sellars, nature is the concept of the sum-total or totality of existing things. Yet, we are confronted with the choice of whether the postulated entities of certain sciences exist or not. When we think along the lines of the manifest image, they do not, when we think along the lines of the scientific image, they do. Given a “reductionist assumption”—which “requires only an appreciation of the sense in which the objects of biochemical discourse can be equated with complex patterns of the objects of theoretical physics”³⁶—the scientific image involves that what there really is, at bottom, are just the objects of physics. And given that the scientific image claims to be a complete image of nature,³⁷ the two images clash. Whatever one thinks about Sellars’ resolution of this clash by introducing the term of a “stereoscopic vision” that involves both images,³⁸ what is relevant for the purposes of the current investigation is that Sellars answers the question “What is

³⁵ Ibid.

³⁶ Sellars 1963: 21.

³⁷ Cf. Sellars 1963: 20.

³⁸ Sellars 1963: 4-5, 8-9.

nature?” in terms of an *image* that unifies what we take to exist—“an image of the world, which, after all, is a way of thinking”.³⁹

For Kant, Sellars conception of two images that are to be unified in “stereoscopic vision” would amount to a strange attempt to endorse both Transcendental Idealism and Realism.⁴⁰ Yet, Kant and Sellars *share* that a concept of nature is nothing directly perceivable and not an object of any science. Rather, a concept of nature is something that guides us in our experience—be that everyday experience or scientific experience. Kant describes ideas—and thus also the idea of nature—as a “focus imaginarius”.⁴¹ He thus shares with Sellars that the concept of nature essentially has a sensible, i.e., non-conceptual, component—even though we arrive at this concept through the “maximization”⁴² of operations such as ‘finding the cause for an effect’ or ‘explaining events in mechanical terms’. After all, the concept of nature is a concept of reason, and reason is “the capacity of the absolute unity of our cognition [Erkenntnisse]”.⁴³ Kant thus answers the question “What is nature?” by saying that nature is an *idea*. This idea guides us in concrete experience, and concrete *experience* is the only way to justifiedly ascribe *existence* to objects. Hence, *we cannot ascribe existence to nature*—even though the idea of nature is the interminable end-point of all experience. Not having this point in view makes us fall into the *problem of free will* or into the *antinomy about organisms*. As I have argued in chapters two and three, both of these problems rest on thinking along transcendentially realistic lines, where a mere idea is awarded with objective reality in such a way as empirical concepts have objective reality, a way which allows the ascription of existence.

³⁹ Sellars 1963: 14.

⁴⁰ The scientific image would, for Kant, be an expression of Transcendental Realism because the activity of thinking is taken to be reducible to neurophysiological and ultimately physical processes. Hence, the activity of the mind is construed along the lines of external objects.

⁴¹ B672/A644.

⁴² B373/A317, B536/A508, B693/A665.

⁴³ XVIII:6, Refl. 4849.

Sellars goes against that point when he says that what an image depicts can be real, and then goes on to determine the manifest and scientific image in the way he does. He thereby allows for images—which seem to correspond to Kantian ideas—to *exist*, which Kant’s philosophy centrally denies. Nevertheless, Sellars’ images do not as clearly involve a *depiction of a formal concept* as we saw it above where the formal concept of time was depicted as “laid out in a block” and the formal concept of nature as a mosaic. In chapter 3, I argued that it is Transcendental Realism to conceive of the idea of mechanistic nature as having *objective reality* in a direct and determinate way. It may be fruitful to understand the concept of objective reality in light of the concept of “pictorial content”. Then, the attractiveness of the mechanistic conception of nature may stem from the pictorial vividness of conceiving of all of nature as a mechanism. Sellars’ scientific image could then be criticized along similar lines. However, if things can be seen that way, then Sellars seems to present an interesting challenge to the proponents of the manifest image by holding that the manifest image is informed by the picture of a person. For, according to Sellars, the primary objects of the manifest image are persons.⁴⁴ Unfortunately, I have to leave this challenge for another occasion.

The rejection of Transcendental Realism allows us to get Transcendental Idealism into view, I suggested. I furthermore suggested that this is tantamount to saying that the rejection of Transcendental Realism allows us to get true metaphysics into view. With respect to the question “What is nature?”, this means that ‘nature’ is not an empirical concept, but a formal concept, an a priori concept. It is through reasoning about how experience is possible in the first place that we can determine the concept of nature. In this way, the concept of nature is determined in a non-empirical way. Throughout chapters one to three I discussed many ways in which true metaphysics is lost out of sight because thinking along transcendentially realistic lines is adopted: Strawson does so by

⁴⁴ Cf. Sellars 1963: 9.

adopting an external vantage point onto perception, Watkins by dogmatically presupposing the principle of sufficient reason, Stang and Proops by thinking that “the past of the universe” or “a state of the universe” can be “fixed” in a more than indeterminate way, Allison and Allais think along the lines of Transcendental Realism by taking the concept of a thing in itself to denote the objects of experience as they really are, and finally, McLaughlin and again Allison by taking the idea of mechanistic nature to have objective reality in a determinate way—such that it could stand in a relation of contradiction to the idea of nature as unified in a teleological way. It is through the appreciation of these mistakes, I think, that we come to understand how to make moves in the endeavor of (true) metaphysics. That is, it is through an appreciation of such mistakes that we learn *how to do philosophy*.

Hegel very much agrees with Kant’s opposition to Transcendental Realism. One might even say that Hegel radicalizes Kant by critiquing a certain instance of Transcendental Realism—in the form of dogmatism—in Kant’s philosophy. It has been argued that a pillar of Kant’s philosophy, the two-stem doctrine, involves a radical *givenness* of the forms of intuition, space and time.⁴⁵ I am not convinced that this givenness has to be understood in such a way that it precludes Kant from engaging in metaphysics proper. As part of the project of this dissertation, I had sought to spell out Hegel’s criticism of Kant. In trying to pin down that criticism I found that the *concrete* accusations that Hegel makes against Kant can be avoided by reading Kant more charitably. Nevertheless, Hegel can be fruitfully approached by ascribing to him the project of doing true metaphysics without relying on our intuitive grasp of the character of space and time: The *Science of Logic* is an exercise in “pure thinking”.⁴⁶

This need not mean that there is nothing in the *Science of Logic* which, from a Kantian vantage point, would have to be classified as a non-conceptual element. For, in Hegel, there is a distinction

⁴⁵ Cf. McDowell 2007.

⁴⁶ Cf., e.g., TW 5:17, 23, 43, 44, 49. Cf. also Pippin 2018: 4-16; Martin 2012: 1-14.

between what Kant calls “conceptual”⁴⁷ and a different mode of cognitive grasp. This distinction is present in Hegel’s distinction between “understanding” (Verstand) and “reason” (Vernunft). For Hegel, philosophical knowledge is cognition of reason, not of the understanding. Equally, ordinary concepts have to be understood in light of ‘the Concept’, in which unity is *not* brought about in a subsumptive manner, but in a “speculative” way. What is “speculative unity”? This question is, of course, a difficult one. I pursued the line that this question is best approached by going through a *concrete instance* of speculative thinking: the Mechanism chapter of the *Science of Logic*.

The relation between the different forms of thought which are thought through in the Mechanism chapter is one of speculative unity. The (form of) thought called “the Mechanical Object” cannot be coherently thought without its successors: the Mechanical Process and Absolute Mechanism. In this way, the Mechanical Object presupposes the other two forms of thought. In terms of metaphysical thinking, the Mechanical Process is thus unified with the Mechanical Process and Absolute Mechanism. This metaphysical “fact” has a real expression in the fact that the objects of the Mechanical Process and Absolute Mechanism are still subject to the “logic” of the Mechanical Object: a planet can be subject to simple collision, namely, when hit by a meteor; and an apple falling to the ground (insofar sharing a sphere with the ground) can be subject to collision with a swung baseball-bat. Nevertheless, the three thoughts of the Mechanism chapter are, to some extent, *distinct*. Neither in phenomena that are to be understood along the lines of the Mechanical Object, nor in phenomena that are to be understood along the lines of the Mechanical Process is there an orientation around a Center as there is in Absolute Mechanism. And in the Mechanical Object, no general determinations

⁴⁷ I argued that Kant’s concept of *transcendental cognition* is the concept of a cognition that is “purely intellectual”. Hence, this cognition should be “purely conceptual”. Nevertheless, Kant emphasizes the hylomorphic unity of the objects of this kind of cognition with empirical cognition. Hence, one could say that *Hegel clarifies the two concepts of “conceptuality” in Kant*: for one, the conceptuality as in play in (philosophically undisturbed) empirical cognition, and then, the conceptuality of the philosophical cognition that transcendental cognition is.

of Objects—or “natures”—are taken into account. One could describe the speculative unity of the Mechanism chapter thus as an “articulated unity”, where one “part” is distinct from the others but also unified, insofar as one cannot be thought without the other. In Christian Martin’s terminology, this is the unity of “serial generality”.

Where does this leave us with respect to Hegel’s answer to the question “What is nature?”? While Hegel reserves the term “nature” for his “Realphilosophie” and thus does not use it for forms of thought discussed in the *Science of Logic*, the form of nature is nevertheless to be made out in the *Science of Logic*, I submit. I have argued that Hegel accepts Kant’s argument, in the Third Antinomy, that external causation cannot be all there is and that thus (pre-)determinism falls to the ground. Insofar as Kant’s conception of nature as an idea is connected to being an unreachable end-point of science, where science involves external causation, Hegel would agree with Kant. However, Hegel radicalizes Kant to the extent that Hegel thus finds external causation relatively uninteresting. For Hegel, it betrays too strong an attachment to external causation that Kant gives that central a role to a conception of ideas as an unreachable end-point of science, end-points that are unreachable by means of a science centered around external causation. Hegel is more interested in the way in which different forms of thought—or, in the sciences: different forms of explanation—relate to each other. Kant gives relatively little attention to an explicit discussion of this issue: He has mounted merely a negative argument in the *Critique of Pure Reason*, that explanations through a causality of freedom are not excluded; and he ends the Dialectic of the Teleological Power of Judgment with the claim that once the antinomy is overcome, we can see mechanical and teleological explanations as relating to each other in such a way as *matter relates to form and means to end*. Hegel articulates this relation more—as a speculative unity. It would have gone beyond the scope of this dissertation to also discuss the speculative unity of Mechanism with the other forms of thought that Hegel discusses in the third book of the *Science of Logic* under the heading of “Objectivity”, Chemistry and Teleology, and their relation

to the subsequent forms, the Idea of Life, the Idea of Cognition, and the Absolute Idea. Nevertheless, the speculative unity of the Mechanism chapter that I discussed can figure as a concrete instance of how Hegel conceives of the unity of nature.

For Hegel, nature is a metaphysical and thus speculative concept. No individual form of thought we employ to cognize nature exhausts nature; yet, these forms of thought—and the phaenomena they appropriately describe—are unified speculatively. Each form of thought—or: metaphysical category—points beyond itself to its successor. If we restrict what we mean by “nature” to what Hegel calls “Objectivity”, then nature is the speculative unity of inanimate phaenomena⁴⁸ and points beyond itself towards Life. If we adopt a wider conception of nature, as Hegel does in his *Realphilosophie*, and include living beings in our conception of nature, then the concept of nature denotes the speculative unity of mechanical, chemical, teleological, and animate phaenomena, all the while pointing beyond itself towards the Idea of Cognition and ultimately the Absolute Idea.

With respect to *philosophical method*, we can say that both Kant and Hegel reject Transcendental Realism. Yet, Kant arrives at his conception of nature through reflection on space, time, judgment, the unity of consciousness, and, ultimately, on how experience is possible. He thereby determines, among other things, that experience is of spatio-temporal substances, the changes of which must have a cause so that we can conceive of these changes as objective. Thereby, Kant determines the basic constituents of nature—without taking an external viewpoint onto experience or nature. A central reason for Kant’s focus on the question how experience is possible is that only through experience can thought have content. A central way in which he argues for that claim is through the Antinomies of Reason. In the antinomies, he shows that thinking that is not grounded in experience runs into irresolvable contradictions. Kant similarly argues for the centrality of experience in the *Critique of the*

⁴⁸ It would go beyond the scope of this conclusion to address the intricate topic of the relation between the arrangement of the forms of thought in the *Science of Logic* and in Hegel’s philosophy of nature.

Power of Judgment, when he argues that the antinomy about organisms can only be resolved by rejecting the assumption of the existing approaches that a conception of nature as thoroughly unified has objective reality in a direct and determinate way. Kant even argues that the concept of an organism is *essentially* an empirical concept. For, no a priori derivation from either theoretical or practical reason is possible. We can thus say that Kant's method consist in an a priori account of experience as contentful thought and in arguing for the centrality of experience by demonstrating the untenability of denying that centrality.

One might think that Hegel rejects Kant's method root and branch and seeks to do metaphysics in a "thoroughly a priori fashion", along the lines of Hume's conception of a priority, where a priori knowledge is the kind of knowledge that a thinker with *no experience whatsoever* has.⁴⁹ This amounts to an overreaction, I think. We should not conceive of the relation between metaphysics and experience as if they were two distinct objects, where, in order to have the one in view, we have to radically turn away from the other. This would flout the insight that metaphysics articulates the *form* of what, empirically, exists. And also Hegel says that one has to be acquainted with the empirical sciences in order to be able to properly understand his *Science of Logic*.⁵⁰ Nevertheless, he thinks that it is necessary to go beyond Kant's method. Within the confines of this dissertation, two concrete points of contention can be made out: Hegel criticizes that Kant merely gives a *negative* argument for human freedom and that the concept of an organism is for Kant an essentially empirical concept. If our self-comprehension, including our self-comprehension as free thinkers, depends on the concept of an organism, then our self-comprehension would be dependent on a brute fact. For Hegel, this is a problematic result. One may wonder whether this problematic result could be avoided while sticking to Kant's method. And maybe Hegel could even be read as doing that. But at least *prima facie*, Hegel

⁴⁹ Cf. *EHU* 4.1.6. Allison Stone's conception of "strong apriorism" goes in that direction. (Cf. Stone 2005: 5-12)

⁵⁰ Cf. *SL*: 37/5:54.

abandons Kant's method and develops a new method—his (in)famous “dialectical method”. By means of “pure thinking”, where we begin with nothing but “pure thinking”, Hegel develops, in his *Science of Logic*, all metaphysical concepts—from Quality and Quantity through Ground, Appearance, and Actuality to Mechanism, Life, and the Idea of Cognition, to name only a few central ones.⁵¹ Thus, it is through “pure thinking”, rather than through reflection on experience, that Hegel arrives at his conception of nature—or, at least, the logical form of it. In chapter 4, I sought to make this method understandable by going through the dialectical movement of the Mechanism chapter of the *Science of Logic*. Even though, as I mentioned above, some non-conceptual element can be seen in the method of the *Science of Logic*, the contrast to Kant is best determined, I submit, by saying that Hegel does not rely on an intuitive recognition of what the true character of metaphysical concepts is; for example, of the metaphysical concepts of space, time, change, cause, nature.

I said that, for Hegel, the concept of nature—due to its logical form as *determined in and part of* the *Science of Logic*—points beyond itself to the Absolute Idea. This means that the unity in light of which we have to understand the unity of nature is the unity of the Absolute Idea, i.e., the unity of philosophical cognition as laid out in the chapter “Absolute Idea” in the *Science of Logic*. In that chapter, Hegel gives an account of his philosophical method. The Absolute Idea is Hegel's account of how to give an account of the forms of account-giving, or his account of “thinking thinking thinking”, of “νόησις νόησεως”. In this way, Hegel's concept of nature is to be understood in light of an idea—or rather, *the* Idea. As Kant's concept of an idea, so the Idea in Hegel is to be understood as a concept of the *absolute unity of cognition*, as the concept of what is *unconditional*. But while for Kant ideas are something we are oriented towards but can never reach, for Hegel, the Idea can be philosophically thought and insofar reached. When reached, we grasp that it is our grasp of the Idea that orients

⁵¹ Martin 2012 and Pippin 2018 have been invaluable for me to understand how exactly the *Science of Logic* works.

cognition of nature and insofar the concept of nature. For Kant, there is an idea of nature, next to other ideas, that orient our cognition—cognition which is grounded in experience insofar as it only has reality through experience. For Hegel, there is only one concept of something unconditional, the one, philosophically graspable Idea—of philosophical grasping. Insofar as everything can be the subject of philosophy, the Idea informs everything. There is thus nothing external to the Idea and our grasping it. This grasping—or thinking—is absolute freedom.⁵² And insofar as this Idea orients everything, it also orients nature—and is insofar the Idea (also) of nature.

⁵² Cf. *SL*: 752-3/6:573.

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