UNIVERSITY OF CALIFORNIA SAN DIEGO

Beyond Mechanism: Rethinking Kant's Philosophy of Nature with the *Critique of the Power of Judgment*

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy

in

Philosophy

by

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2024

This dissertation of Juan Carlos González is approved, and it is acceptable in quality and form for publication on microfilm and electronically.

University of California San Diego

2024

DEDICATION

A mis abuelos Alberto, Marta, Osiel y Tere, sin ellos no soy nada.

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All references to Kant's works will cite the Akademie edition (1902—) by volume and page number, except references to the *First Critique*, which use the standard A/B pagination. Throughout this dissertation, I have relied upon the translations in the Cambridge edition (1992—) of Kant's works. I use the following abbreviation scheme for ease of reference:

Anth: *Anthropology from a Pragmatic Point of View*

CPJ: Critique of the Power of Judgment

CPrR: Critique of Practical Reason

Dreams: Dreams of a Spirit-Seer

End: The End of All Things

False: The false subtlety of the four syllogistic figures

G: Groundwork of the Metaphysics of Morals

ID: Inaugural Dissertation

Idea: Idea for a Universal History

LL: *Lectures on Logic*

Letters: Kant's personal correspondences

LM: *Lectures on Metaphysics*

MFNS: *Metaphysical Foundation of Natural Science*

MM: Metaphysics of Morals

OTP: On the use of teleological principles in philosophy

Organ: On the Organ of the Soul

Orient: What does it mean to orient oneself in thinking?

R: *Reflexionen*

Rel: *Religion within the Boundaries of Mere Reason*

Peace: Toward Perpetual Peace: A Philosophical Project

ACKNOWLEDGEMENTS

My time at UC San Diego has corrected a misconception I previously held about Philosophy. For most of my life, I thought that Philosophy is a solitary endeavor and that one's greatest work comes into fruition in the loneliness of their study. Contrary to this picture of the lone philosopher, I have learned that the best Philosophy happens in community.

I am privileged to have benefitted from the support of a wide and wonderful community while at UCSD. The heart of my community is my family. My parents – Juan Osiel González and Ana Mari Pardiño – have instilled in me the courage to pursue my dreams. I love them for this. My siblings – Christina, Osiel, and Cesar – are my best friends. I cannot have accomplished a fraction of what I have without their belief in me. My abuelos – Calixto Osiel González, Sylvia Teresa Tella González, Marta Gloria Alejandra Álvarez, and Alberto Pardiño – have taught me lessons about the virtues of sacrifice and dedication that I will never forget. Ultimately, everything I do is to honor them.

I could not have made it through graduate school in one piece without my chosen family. I am lucky to have a second set of parents – Cass Sullivan and Mark Livingston – residing here in San Diego. I am also grateful to have found two more of my best friends – Andrew Bollhagen and Richard Vagnino – at UCSD. They have taught me more about what it means to be a good philosopher and a good human being than they will ever realize. Bas Tönissen, Jacob Zellmer, Dallas Amico, and Zack Brants were by my side from day one in San Diego, providing constant support and friendship throughout. Countless others in the department and beyond – Alex Altonji, Eric MacPhail, Amdrew Thompson, Thea Richards, Amalia Astin, Henry Argetsinger, Will Albuquerque, Leo Moauro, Daniel Cohen, Max Edwards, Claudi Brink, Roz Chaplin, Brian Tracz, Annc Thresher, Joseph Martinez, Ayoob Shahmoradi, Marcus McGahhey, Ayda Niknami, Sam

Ridge, Noam Tiran, Karina Ortiz, Emiliano Salomon, Imani Howard, Moraima Arias, and those I've inevitably forgotten – have demonstrated to me that true friendship requires the discipline to stop talking about Philosophy every once in a while.

Perhaps my greatest boon is the wealth of advisors, mentors, and philosophical role models I have managed to surround myself with over the last decade. My career could not have even started without the encouragement of Professor Timothy Brownlee – my first mentor. And it could not have continued without the guidance of Professor Zed Adams and the provocations of Professor Jay Bernstein – my first Kant teacher. Professor Clinton Tolley is my living standard of what an excellent researcher and teacher of Philosophy is. He has also taught me invaluable lessons about what it means to be a philosopher beyond the classroom and the study. Professor Eric Watkins has shown me what it means to be a proper historian of philosophy – one that treats the texts and traditions that matter to us with scrupulous rigor and deep care. Someday, I hope to mentor my students as well as Professor Monte Johnson has mentored me. He has shown me that positive reinforcement and exacting criticism are not mutually exclusive. Professor Manuel Vargas has empowered me to use philosophy as a tool for self-expression and self-discovery. I can never thank him enough for pushing me to explore the boundless depths and beauty of Latin American Philosophy. I would be remiss not to mention how grateful I am that the department brought Professor Patricia Marechal onboard my second-to-last year in the program. Her compassion, guidance, and friendship have made a lasting impact on my life. Professors Lucy Allais, Karen Ng, Nick Riggle, and Rachel Zuckert are proof that excellent mentorship shouldn't be confined to one's own department – they have gone the extra mile to push me to be better and to advance my career. I would like to especially thank Professor June Yang – everything I know about being a great colleague and teacher she has taught me.

Finally, I reserve my deepest gratitude and appreciation for my partner Chase Sullivan Krueger. I owe all my success in life to her love and support. I love you, Chase.

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PUBLICATIONS

González, Juan Carlos (2023). "La revolución kantiana de Antonio Caso." In V.A. Armella & A.P.T. Chagoyán (Eds.), *Argumentos de filosofía política de la tercera y cuarta transformaciones de México* (pp. 61-80). Editorial Lambda.

González, Juan Carlos (2023). A Revised Existentialist Look at the Americans. *Inter-American Journal of Philosophy* 14 (2):36-51. *Recipient of the 2023 Inter-American Philosophy Award.*

ABSTRACT OF THE DISSERTATION

Beyond Mechanism: Rethinking Kant's Philosophy of Nature with the *Critique of the Power of Judgment*

by

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My dissertation defends a non-mechanistic interpretation of Kant's philosophy of nature. Inspired by the picture of nature in the *Critique of Pure Reason* and *Metaphysical Foundations of Natural Science*, most readers align Kant with Early Modern mechanists, who claim that we can know that the internally purposive form of causality characteristic of organisms has no place in nature. To these mechanistic readers, Kant banishes internal purposiveness from nature. To moderate mechanistic interpreters, because we cannot know whether there are internally purposive things in nature and we can demonstrate that mechanism applies to nature, Kant pushes us to believe that any seemingly internally purposive natural products will eventually be explained in mechanistic terms. To strong mechanistic interpreters, Kant gives us the tools to know that there

is no room for the special kind of teleology organisms exhibit in nature. My non-mechanistic interpretation rejects this trend by arguing that Kant urges us to believe that the internally purposive activity characteristic of organisms exists in nature. Belief in this context is a firm, positive, and voluntary attitude that aligns with and serves a subject's interests and ends, and that has implications for the subject's rational action, assertion, and deliberation. Kant's stated goal in the third *Critique* is to bridge the gulf between freedom and nature. My non-mechanistic interpretation offers a new account of how Kant promises to construct this bridge.

Introduction. Kant and the mechanism of nature

With the advancement of scientific theories and technologies in Early Modernity, philosophers become increasingly enthralled by the prospect of giving an exhaustive account of nature in purely mechanistic terms. While some (e.g., Descartes and Hobbes) affirm that nature is wholly determined by mechanism, others (e.g., Post-Kantian Idealists and Romantics) contend that nature is non-mechanistic in important respects. Inspired by the picture of nature in Kant's *Critique of Pure Reason* and *Metaphysical Foundations of Natural Science*, most readers align Kant with his Early Modern predecessors.

I dub this interpretation of Kant's philosophy of nature the *mechanistic* interpretation. The mechanistic interpretation dominates the scene in the centuries following Kant's death. As we shall see below, philosophers and commentators as diverse in their views as Jacobi, Hegel, Schelling, Goethe, Schopenhauer, Nietzsche, Henri Bergson, Helmuth Plessner, Henry Allison, Allen Wood, Hannah Ginsborg, Paul Guyer, Peter McLaughlin, James Kreines, Robert Richards, Yirmiyahu Yovel, John Zammito, and Rachel Zuckert, among many others, have opted for some degree of mechanistic reading of Kant's doctrine of nature. To all mechanistic readers, Kant banishes the special kind of purposiveness organisms exhibit from nature. To *moderate* mechanistic readers, because we cannot know whether this teleology is active in nature and we can demonstrate that mechanism applies to nature, Kant pushes us to believe that any seemingly living natural products (such as plants and animals) will eventually be explained in mechanistic terms. To *strong* mechanistic readers, Kant gives us the tools to know that there is no room for internal purposiveness in nature. Plants and animals only superficially differ from planes, cars, rocks, and other inanimate objects, for we can prove that the deepest causal mechanisms driving both kinds of being are the same.

While the mechanistic interpretation of Kant's doctrine of nature has been the most popular, it may undermine the main ambition of the *Critique of the Power of Judgment.* In the *Critique of the Power of Judgment* Kant sets out with the task of bridging an "incalculable gulf" between the domains of nature and freedom (*CPJ* 5:175) and, if we are to believe the letter of the text, he completes this task. Kant concludes the *Third Critique* with the triumphant pronouncement that he has proven the objective reality of freedom in nature (*CPJ* 5:474). If his assessment of his work is right, this represents a monumental achievement, for, without the completion of this task, a critique of pure reason "would be incomplete" (*CPJ* 5:168). Kant's discussion of the purposiveness of nature occupies him for the entire second part of the third *Critique*, undoubtedly playing a significant role in his mission to bridge the gulf between freedom and nature.

Again, to the mechanistic interpreter, Kant's picture of nature ousts the unique non-mechanistic activity specific to living beings from nature.[1] In his *System of Transcendental Idealism* Schelling states that "organic nature furnishes the most visible proof of transcendental idealism" (1978, 122/490). German Idealists, Romantics, and Phenomenologists lament that Kant offers us a completely mechanistic picture of nature, one that makes organic activity something to be explained away by and reduced to mechanism. For Kant, the natural world is wholly mechanistic, and the non-mechanistic form of causality characteristic of living beings can have no place in nature.

One issue with this picture is that we like to think of ourselves – human beings – not as free-floating spirits existing in a supernatural sphere, but as *organisms* – that is, as embodied

[1] For a concise synopsis of the philosophers who have posed this challenge to Kant, see the Introduction and first chapter of Karen Ng's (2020) *Hegel's Concept of Life*.

creatures situated in nature who act in accordance with a variety of purposes. By rejecting that there are *any* non-mechanistic causal structures typical of organisms in nature, the mechanistic reader suggests that Kant pushes us to assent to the unintuitive claim that human beings are not organisms at all and that they do not really act on the basis of an internal purposiveness. If they are correct, it is difficult to explain why human beings, on Kant's picture, seemingly have the power to shape their world, the trajectory of history, and social, political, and scientific institutions *in accordance with purposes* nested in us by our (rational) nature.[2] Another issue with this picture is that it foists an unattractive anthropocentric understanding of nature onto Kant, rendering him someone who thinks that plants and animals are nothing but complex inanimate objects. Most perilously, by furnishing a picture of nature according to which we can *know* there is no internally purposive causality, we may worry that Kant risks leaving the "incalculable gulf" between freedom and nature unbridged – the mechanistic domain of nature and the non-mechanistic domain of freedom are, at best, distant islands in the same archipelago.

In this Introduction, I have two goals. One is to animate the reasons why so many philosophers and commentators have opted for a mechanistic reading of nature in Kant. The second

[2] For instance, in the *Idea for a universal history with a cosmopolitan aim*, Kant announces that, while human actions "are determined just as much as every other natural occurrence in accordance with universal laws of nature," we still have grounds for hoping that "the play of the freedom of the human will" gives direction to history (*Idea* 8:17). Nature has, as its highest aim, the complete and purposive development of all natural creatures' predispositions. Human beings are special creatures in that they have a free will "grounded in" reason (*Idea* 8:19), and their faculty of reason instills in them ("the only rational creature on earth") the predisposition to extend its "rules and aims of the use of all its powers far beyond natural instinct" without itself operating instinctively (*Idea* 8:18-19). The *Idea* essay illustrates that Kant thinks of reason as teleologically structured, as guided by purposes that are instilled into us by our rational natures, and as having a real, tangible effect on the trajectory of history. What is less clear (and what I address here) is *how* the ends of a "rational creature" can serve as the principles of changes in the real world.

We find a similar interplay in the 1795 essay *Toward Perpetual Peace*, in which Kant claims that perpetual peace is a *project* that will never be fully realized, is not just an "empty idea" (*Peace* 8:387), and in some sense conditions our efforts to make the world a more peaceful place. Such a pursuit is not inherently ridiculous because of the guarantee that "the great artificer nature (*natura daedala rerum*)" makes it so that purposiveness "shines forth visibly" [*sichtbarlich Zweckmäßigkeit hervorleuchtet*]" from the mechanical course of nature (*Peace* 8:360). Again, we should wonder, how is it possible for an abstract, unfulfillable task to have an impact on the real world? What does it mean to conceive of nature as a place where purposiveness can "shine forth visibly" from a mechanistic plenum?

is to show that salient aspects of Kant's philosophy defy the mechanistic reading – indeed, the goal of my dissertation is to display and motivate a *non-mechanistic* reading of Kant's doctrine of nature. In the end, my hope is to demonstrate that Kant's philosophy leaves us with a sophisticated picture of the human being as an *organic* being and does not make "sub-human" organisms out to be nothing more than complicated machines.

In the first section, I lay out my basic understanding of the *mechanistic* reading of Kant. In the second section, I survey just a few prominent mechanistic readers of Kant throughout history. In the third section, I present a few ways in which we can mount a *non*-mechanistic reading of Kant and make progress in the way of responding to this challenge. For one, when we introspect, we find that we have the cognitive resources to spell out the details of the non-mechanistic causality characteristic of minded human life. Against the mechanist, we might say that we human beings are purposive and that we exist in nature. Still, the mechanistic reader might insist that the human being is a special case, and Kant has no means of showing us that purposiveness is possible in natural products like plants and animals. In response to this, I appeal to belief [*Glaube*] in the organism. In this dissertation, I argue that we can believe that there are organisms in nature, and this belief plays an indispensable function in theoretical pursuits, morality, and the overarching project of the third *Critique*. The final section of my introduction maps out my systematic defense of believing in the organism, which is the backbone of my original non-mechanistic interpretation of Kant's philosophy of nature.

1. Mechanistic readings of Kant: A synopsis

Interpreters of Kant have famously reasoned that, because we cannot empirically cognize the purposiveness of nature or of an organism, we can never know whether there are organisms in

nature. Moreover, observing that we can demonstrate that mechanism applies to nature, these readers claim that we ought to believe that nature will one day be completely explained in mechanistic terms. Others have defended a stronger reading, arguing that, to Kant, we can know that nature is completely determined by mechanism.

The first camp of readers adopts a moderate mechanistic interpretation of Kant's doctrine of nature.[3] To these readers, we attribute non-mechanistic forms of causality such as purposiveness to nature in the form of a reflecting judgment, and reflecting judgments never result in cognition. Given that reflecting judgments never lead to cognition of their objects, we cannot say whether their objects exist in the natural world. Since we judge nature to be organic on the basis of such a judgment, the moderate mechanistic reader reasons that we cannot say whether there are organisms in nature. In addition, since we can know that mechanism applies to nature, it makes sense to at least believe that anything that appears purposive will eventually be explained in mechanistic terms.[4]

Some moderate mechanistic readers defend their view by asserting that the principle of purposiveness is a mere projection. We attribute purposiveness to nature because it is convenient for our cognitive lives, allowing us to make judgments, form concepts, and organize our mental lives in a way we could not otherwise; but this projection tells us nothing about nature or natural products (Zammito 1992 and Zuckert 2007). Insofar as he endorses such a reading, John Zammito falls into the moderate mechanist camp. Zammito insists Kant uses "merely heuristic" or "regulative" language when attributing a technique to nature. The "deeper point" Kant is making

[3] Most prominently, McLaughlin 1990, Zammito 1992, Zuckert 2007, and Ginsborg 2015. Notice that the moderate mechanistic commitment to the supremacy of mechanism takes the form of a *belief*. While this is significant, I reserve detailed discussion of what exactly this means for Part II of the dissertation.

[4] As I point out in Chapter 6, this claim is sometimes accompanied by a positive belief that nature can someday be explained in purely mechanistic terms.

when he attributes a technique to nature is "that our discursive form of thought can only function with the sort of experience represented by natural art or "technic"" (1992, 155). However, because Kant denies that we can have empirical cognition of nature's purposiveness, Zammito says that we alternatively comprehend nature's purposive activity by means of a "projection of our purposive activity" (1992, 155). Thus, when describing the technique of nature, Kant is only making a claim about our mental life – that is, we project a certain image onto nature in order to gain access to certain kinds of mental states. We cannot, he suggests, know whether purposiveness exists in nature.

Rachel Zuckert thinks of purposiveness as a "form of the unity of the diverse as such" (2007, 95). Zuckert develops this view of purposiveness in response to an explanatory gap that she claims is left over by the *Critique of Pure Reason* – that is, it does not give us an account of how to deal with the diversity of nature, and since empirical knowledge seems to require an ability to form concepts that unify nature's contingent diversity, it seems to leave us without the sufficient resources for an account of empirical knowledge. Luckily, the *third Critique* introduces us with a principle that establishes the unity of the diverse in nature; purposiveness is the "epistemic principle that governs the unity of representations or judgments", allowing "human subjects [to] render comprehensible that which is not immediately comprehensible to us – viz., whatever intelligibility there might be in the empirically given world beyond that which derives from our a priori concepts" (2007, 10). When conceiving of purposiveness as a principle by means of which we unify the diverse, Zuckert also maintains that the paradigm case of it is purposiveness without purpose, as this notion of purposiveness is "teleology not in the sense of *serving* a previously identified good, but of aiming *towards* an indeterminate future end, and this new form of teleology characterizes only and specifically human, judging subjects" (ibid). So, Zuckert presents us with

a remarkably epistemic notion of purposiveness, according to which it is primarily a principle that structures our understanding of the world and objects in it. Whether such unity is actually present in nature we can never know.

An interpreter that is comparatively difficult to pin down but still veers towards a moderate mechanistic reading is Hannah Ginsborg, who equates purposiveness with a conformity to normative law (see 2015, esp. Essays 3 and 10). In one of her many essays on the topic of purposiveness, Ginsborg concludes, "Kant's claim that we ascribe purposiveness to nature and to our reflection on beautiful objects amounts to the claim that we are committed to an 'ought' which, like that of design, belongs neither to theoretical nor to practical reason, but which, unlike that of design, has no empirical warrant" (2015, 254). The suggestion that purposiveness amounts to an "ought" that "has no empirical warrant" should stand out to us as moderately mechanistic; when we attribute purposiveness to our reflective processes or to an object, we make no claim about what these things are, but only make an assessment regarding whether they conform to our concepts of how they ought to be. Lacking any empirical warrant, judgments that attribute purposiveness to nature ultimately do not tell us anything about nature, only further revealing the idiosyncrasies of our mental lives as judgers.

The moderate mechanistic line is perhaps best summarized by Peter McLaughlin's reading of Kant. McLaughlin doubts that we can ever establish that an organism is real because we cannot *cognize* the inner purposiveness characteristic of it. To have empirical cognition of an object, the object would need to be given to us in sensibility and thought through the understanding. However, the kind of causality exhibited by an organism *cannot* be thought through the understanding, for the understanding is mechanical by its very constitution and the purposiveness of an organism is inherently *non*-mechanistic (see 1990, 176). Unable to think the purposiveness of the organism

through the understanding, we cannot attain empirical cognition of the purposiveness in question; and lacking empirical cognition of an organism's purposiveness, "Organisms…seem to involve a causality *sui generis* that we cannot recognize as real" (2014, 156; see also 1990, 47).

But he does not stop short of the merely negative claim that we cannot recognize the reality of the organism. Based on his commitments regarding empirical cognition, the inherent mechanism of the understanding, and the laws that govern mechanism, McLaughlin reaches the *strong* mechanistic conclusion that we can know all the entities we judge to be organisms do not really exist. While we cannot empirically cognize the causality characteristic of an organism, we are still presented with organisms in outer sense, as objects of experience. However, all objects of outer sense are subject to the Second Law of Mechanics – i.e., for every change in matter there is an external cause for that change. Whatever is subject to the Law of Inertia is mere matter in motion, which implies that all objects of outer sense are mere matter in motion. Thus, insofar as they are presented to us in outer sense, the things we call organisms are not really organisms at all.

A stated outcome of the third *Critique* is that freedom (and rational activity) can find expression in nature. However, if we follow the mechanistic lines above, we either cannot establish or must deny that there is *any* internal purposiveness in nature. As far as we know, nature is material all the way down. Matter as it appears to us is dead, only capable of movement by means of external principles. For freedom and reason to find expression in nature, this would need to be by means of some non-mechanistic, internal principle of causality. If there is no such non-mechanistic causality (because the things we call internally purposive are just bundles of matter in motion in accordance with Laws of Physics), it is not possible for non-mechanistic powers guided by freedom and reason to make their presence felt in the natural world. Kant's philosophy banishes all forms of internally

purposive, non-mechanistic causality from nature, and as a result, his project in the third *Critique* fails. The incalculable gulf remains.

2. A historical panorama of mechanistic readers

Historically, critics claim to have shown that, in the *Critique of the Power of Judgment*, Kant does not give us the resources to establish that anything non-mechanistic exists in nature. On this basis, these critics have argued, we cannot know that there is any kind of causality besides mechanism at work in nature. From this conclusion, this historical panorama of critics has argued in unison, it follows that Kant's resolutions in the third *Critique* are either unsatisfying or unsatisfactory.[5]

Mechanistic readings abound in the years immediately following the publication of the *Critique of the Power of Judgment*. In "The Early Philosophy of Fichte and Schelling" (2000), Rolf-Peter Horstmann depicts Jacobi and, subsequently, Schelling as philosophers who accused Kant of being a mechanist. Horstmann summarizes that, to these thinkers, "teleological explanations, which are framed in terms of purposes and ends, do not give us insight into what is really going on in nature; they are heuristic devices that we use whenever we cannot figure out what really is the case" (2000, 130). According to Horstmann, because of this Jacobi believes that Kant abandons "the idea that organisms and other forms of living nature have an ontological status of their own", and this abandonment in turn "leads to a conception of reality that conceives of the world in its totality as a huge mechanism" (ibid). Like Jacobi, Shelling believes that depriving the organic of a status of its own leads to an excessively mechanistic conception of nature. Unlike

[5] It's worth noting that, to some commentators, Kant had the tools to succeed in the mission he set out with in the third *Critique* (i.e., that is bridging the gulf between freedom and nature) but did not "push his line of argument as far as his successors would, as Fichte, Schelling, and Hegel" (Taylor 2006, 30).

Jacobi, Schelling envisions a Kantian solution to this problem. As Horstmann tells us, "This can be achieved by a different interpretation of Kant's conception of the supersensible, an interpretation which liberates this idea from the status of being a merely problematic item, and thus opens the way for giving a different account of the validity of teleological judgments" (ibid). Of course, Schelling ultimately gives up on this approach "because it leads to insoluble problems concerning the determination of the relation that holds between the world of objects and reality proper" (2000, 132). Thus, it seems that Kant is mired in a view that leaves us at best agnostic and at worst in denial about the existence of purposiveness in nature.

A mechanistic picture of nature is the backbone of a programmatic critique of Kant's idealism launched by Hegel. According to Karl Ameriks, "Hegel asserts that the essence of Kant's idealism is its "subjectivity," its wholly limiting the categories to *our* mind" (1985, 24). That is, Kant's idealism is flawed because it does not give us a surefire means of connecting appearances (or, perhaps better, the means by which we come to cognize appearances) to reality. Kant's treatment of purposiveness exemplifies this problem, since Kant's doctrine of inner purposiveness, which he appeals to when explaining the life of organisms, says that teleological judgment is not a form of determining judgment, and only determining judgment has a "given objective concept" as its predicate (*CPJ* 20:223). Thus, Hegel, says Ameriks, argues that Kant's excessively subjective doctrine of purposiveness blocks him from establishing firm knowledge about the existence of purposive things, such as organisms.

In Chapter 3 of *Reason in the World*, Jim Kreines opens by stating that "Hegel opposes Kant's skeptical conclusion" that we cannot know living beings manifest inner purposiveness (2015, 77). In Chapter 8, he also sums up why Hegel's remarks on life in the *Science of Logic* would lead him to a mechanistic reading of Kant when he writes,

> Hegel has defended the possibility of such knowledge beyond Kant's strict bounds of sensibility—but without need of anything like a superior-in-kind intellect capable of grasping reality immediately and all at once. Since life is a first form of the idea, the same account of knowledge will carry over to the latter. For the knowledge of the inner purposiveness of living beings just is knowledge of the reciprocal process establishing the intimate relation of type and token, concept and individual. And that is why Hegel's overall argument supports his epistemic optimism. It supports his rejection of Kant's pessimistic view according to which ideas are *only* ideas, in the sense that we cannot know whether they have any true realization, but can only seek knowledge of such forever without hope of achieving it. (2015, 204)

Kreines's recapitulation of Hegel's gripes with Kant on life and purposiveness affirm the diagnosis I have been giving so far. Hegel adopts a mechanistic – or "skeptical" and "pessimistic" – reading of Kant's doctrine of purposiveness, concluding that we cannot know that a thing is purposive when we judge it to be such. This leads Hegel to endorse the conclusion that, for Kant, we cannot know that any organisms are real, a conclusion typical of moderate mechanistic readings of Kant. To Hegel, this is an unsatisfying outcome of Kant's system that future generations must rectify.

The Romantics take a similar, but slightly stronger approach, asserting that Kant is a card-carrying mechanist. In *The Romantic Conception of Life*, Robert Richards offers a version of this charge against Kant when he groups Kant alongside Descartes, Newton, and Hume as philosophers who employed mechanism as "the basic concept by which to understand not only the inanimate universe, but the living world as well" (2010, xvii). To Richards, Kant only thought of purposiveness as a heuristic and a placeholder: "Kant, of course, thought only mechanistic laws could scientifically explain organisms. As an heuristic expedient, we could regard plants and animals as purposive; but teleological accounts, he maintained, had epistemic value only as suggestions leading to efficiently causal explanations" (2010, 159). The Romantics, in contrast, inverted this relationship – mechanism was merely a guide into the realer realm of teleology. Rejecting the mechanists' reduction of teleology to mechanism restores the reality and sanctity of life in nature.

Henri Bergson's 1909 *L'évolucion créatrice* similarly depicts Kant as closer to his mechanist predecessors than his Idealist and Romantic successors. Even though Kant "opened up the pathway to a new philosophy" (1909, 357) boasting a superior account of intuition compared to that of his predecessors, Bergson laments that Kant still did not have the resources to explain phenomena such as consciousness and life.

> Kant is again fairly close to his predecessors. He does not admit any middle ground between the non-temporal and time as scattered out into distinct moments. And since there is no intuition that transports us into the non-temporal, every intuition would therefore be, by definition, sensible. But between physical existence, which is scattered out in space, and a non-temporal existence, which could be nothing other than a conceptual and logical existence, such as the one discussed by dogmatic metaphysics, is there not a place for consciousness and for life? Yes, incontestably. We catch sight of it the moment we place ourselves within *durée* in order to go from there to the moments, rather than beginning from the moments in order to connect them together in *durée*.

In order to account for life, Kant would need access to a form of intuition that is not reliant upon a "time as scattered out into distinct moments." Because Kant's notion of intuition is grounded upon such an abstract, reified concept of time, he cannot admit a kind of intuition into his system that tracks what Bergson calls *durée*. Without access to a proper notion of *durée* that is not reducible to "moments", the Kantian framework neither leaves room for consciousness nor the organism.

Phenomenologists and those operating adjacent to the phenomenological tradition also characterize Kant as a mechanist. One version of this critique in phenomenology is summed up well in the first chapter of Helmuth Plessner's *Levels of Organic Life and the Human*. Plessner appeals to hermeneutics and phenomenology as tools necessary for providing a "systematic answer to the question of the possibility of life understanding itself in the medium of its experience through history" (1928, 20), a question that one must answer if they hope to fully understand the human and their place in nature. In contrast, Kant "treated [the question of the possibility of understanding

life] from the restricted perspective of the possibility of exact sciences or of the mathematizability of experience" (ibid). To Plessner, Kant is another philosopher in a long line of philosophers who forewent a genuine analysis of life by relying on the "exact sciences" (1928, 12). The exact sciences base their knowledge in the understanding and its categories, limiting knowledge claims to empirical cognition. While we can empirically cognize the mechanistic activity of a thing, we cannot cognize its purposiveness. Assuming that living and organic activity are fundamentally non-mechanistic and instead purposive, Kant's Critical philosophy is incapable of giving us knowledge that any organisms exist, and, subsequently, it cannot give us an adequate explanation for the presence of life in the world: "[To Kant,] both the mechanical and teleological principles with respect to organism are mere maxims of inquiry of comparable, but not total, explanatory power. We simply do not know what, if anything, is "behind" life, "causing" its basic purposive quality in some ultimate sense." (Plessner 1982, p. 247)

As I shall show throughout my dissertation, moderate mechanistic – and even strong mechanistic – interpretations of Kant's doctrine of nature are tempting for good reason. For now, I want to signal that there is a plausible alternative way of reading Kant's doctrine of nature.

3. Beyond mechanism

So far, we have seen that, to many interpreters throughout history, Kant thinks that we neither definitively prove nor conclusively deny the internal purposiveness of certain natural entities. As a result, the incalculable gulf between freedom and nature will never be bridged, for the purposive activities of reason can never be expressed in nature, which is a thoroughly mechanistic concatenation of objects.

I want to consider two avenues for motivating a non-mechanistic reading of Kant. The avenues traced here are meant to salvage "the possibility of a third way between a strong teleology and a brute materialism" in Kant's doctrine of nature (Weber and Varela 2002, 99).[6] We must accept Kant's contention that we cannot determinately judge that there are organisms. But this claim is quite different from the assertion that we can know that there are no organisms. Indeed, establishing such a claim would seem to presuppose the truth of the constitutive thesis of Kant's Antinomy of Teleological Judgment – namely, the principle that "All generation of material things is possible in accordance with merely mechanical laws" (*CPJ* 5:387). However, this principle (and its antithetical counterpart) cannot be proven true (ibid).[7] So, Kant's position leaves us unable to determinately judge whether there are organisms one way or the other and lends itself to a moderate mechanistic reading with respect to determining judgments of organic activity. Nevertheless, I show that there is a positive epistemic attitude that Kant does not prevent us from adopting with respect to the organism.

First, I want to float an escape route that seems rather cheap, but readily available, for Kant – that is, Kant never denies that human beings are alive and that they are capable of making their ends real in the world. We are "acquainted with" the inner purposive causality characteristic of *minded human life*.

> *Life* is the faculty of a *substance* to determine itself to act from an *internal principle*, of a *finite substance* to change, and of a *material substance* to motion or rest, as change of its state. Now **we are acquainted with** [**kennen wir**] no other internal principle in a substance for changing its state except *desiring*, and no other internal activity at all except *thinking*, together with that which depends on it, the *feeling* of pleasure or displeasure, and *desire* or willing. (*MFNS* 4:544, translation modified, my emphasis)

[6] Weber and Varela seek this "third way" in Kant's remarks on organisms in the *Opus Postumum.* For a different approach to finding this third way, see Gambarotto and Nahas 2022.

[7] A more thorough treatment of the constitutive principles of Kant's Antinomy of Teleological and of the entire Antinomy, see Chapters 5 and 6.

In Kant's *Logic Lectures*, acquaintance is defined as a lower, although not the lowest, degree of cognition. Higher degrees of cognition are more refined, recruiting mental faculties such as reason and the understanding. In contrast, acquaintance does not quite reach the level of understanding, comprehension, or rational insight, although it surpasses mere representation and perception, which is representation with consciousness (see *LL* 24:65-6 and 24:133). When we are acquainted with an object, we are aware of it such that we can compare it to and distinguish it from other objects (*LL* 24:134). Although this is a less refined mental state than full-blown theoretical cognition because we lack a distinct concept with which to combine our intuition of the object in question, we at the very least have a direct, intuited, and conscious grasp of that with which we are acquainted. Indeed, acquaintance is enough to identify the object to which my representation is related (*LL* 24:133).

In addition, while Kant denies that the concept of a natural end has objective reality, but seems content to claim that the "concept of a causality through ends (of art) certainly has objective reality (*CPJ* 5:397). It is simply the concept of nature (and natural products) acting in accordance with concepts the reality of which cannot be proven. So, combining these insights, we have the resources to say that we (human beings) are alive, our life is connected to rational activities, and that some form of our teleological purposive activity exists in nature.

I worry that this response is too easy and wonder if the mechanistic readers throughout history are not getting at something deeper. After all, mechanists could be fine with allowing a mental or divine teleology to (somehow) exert its influence on nature from without. Thus, the mechanist cannot simply be stating that Kant denies the reality of human purposiveness. Rather, mechanists must be emphasizing that Kant denies the objective reality of the *Naturzweck* – the natural end. In the *System of Transcendental Idealism*, Schelling encapsulates why the concept of

the organism – defined as a natural object that organizes itself in accordance with a natural end – is essential for bridging the gap between self-consciousness and nature.

> The organism is the condition under which alone the intelligence can distinguish itself, as substance or subject of the succession, from the succession itself, or under which alone this succession can be something independent of the intelligence. That it now appears to us as though there were a transition from the organism into the intelligence, whereby an affection of the former brings about a presentation [*Vorstellung*] in the latter, is a mere illusion, because we can indeed know nothing of the representation before it becomes an object to us through the organism: the affection of the organism therefore precedes the presentation in consciousness, and must thus appear, not as conditioned thereby, but rather as the condition thereof. (1978, 127/ 497)

We have neither the space nor the time to unpack this passage in the detail that it no doubt demands. However, one point is clear: Schelling states that the *organism* and the concept of the *natural end* associated with it is a condition for "intelligence" – it is constitutive of self-conscious mental activity. It "precedes the presentation in consciousness", has an existence of its own independent of the mind, but is also an indispensable condition for consciousness. That is, representing the organism in an immediate way – as an "affection"[8] – enables consciousness, self-consciousness, and intelligent activity in general. In this sense, the reality of the organism enables mental activity and the two – mental activity and organic nature – are for this reason radically intertwined. The internally purposive activity of an organism is an essential precondition for our own conceptual activity. From the perspective of Schelling (and Hegel), since Kant denies that there are organisms in nature, his account of mental activity is incomplete, leaving us rational beings fundamentally alienated from nature.

Of course, at this point, a seasoned Kant scholar might contend that Schelling, Hegel, and their ilk had different intentions and presuppositions in mind when formulating their philosophical systems. Faulting Kant for depriving the concept of an organism objective reality, and therefore

[8] See Ng 2020, 113.

the ability to play a constitutive role in our mental activity, is anachronistic and gratuitous. Nevertheless, a seasoned scholar of German Idealism might insist that Kant is missing something essential from his philosophy by denying the objective reality of the organism and its real internally purposive activity. While Kant claims that the purposiveness of nature conditions our mental activity, such purposiveness plays no real role in conditioning mental activity. By denying its reality, Kant leaves no real role for the purposiveness of nature in his picture of mental life, and this is a glaring omission on his part.

In what follows I defend a compromise that may make the seasoned Kant scholar and the seasoned scholar of German Idealism happy. Kant certainly cannot establish the objective reality of the natural end. This would violate his commitment to the notion that the Second Law of Mechanics explains all changes in objects we empirically cognize and contradict the text of the third *Critique*. We cannot empirically prove that organisms exist, but we can believe in the existence of the organism, in the sense that Andrew Chignell constructs in "Belief in Kant" (2007). Belief in this sense is something like a "firm, positive, and voluntary attitude that is subjectively sufficient$_2$ for a particular subject in a particular circumstance, given his or her interests and ends, and that has implications for the subject's rational action, assertion, and deliberation" (2007, 359).[9]

By accepting the claim that organisms exist as a matter of theoretical belief, we do not attain empirical cognition or knowledge of the existence of organisms, but this belief can "give direction to our inquiry and motivate the search for unified, systematic, simple theories, without themselves amount to Knowledge", or a mental state for which we do have sufficient objective and subjective grounds of assent (2007, 353). *Believing* in organisms can honor the limitations that Kant sets on our critical faculty of reflecting judgment while linking reason and nature. After all,

[9] I offer a more detailed account of assent, knowledge, and belief in Part II of the dissertation,

as Kant himself writes in the Canon of the *Critique of Pure Reason*, "purposive unity is still so important a condition of the application of reason to nature that I cannot pass it by, especially since experience liberally supplies examples of it" (A826/B854). Kant can animate an alternative to the mechanistic reading by insisting that we *believe* in the existence of a real, internally purposive unity like an organism, thereby allowing us to conceive of nature as hospitable to the internally purposive activities of reason and freedom.[10]

4. A roadmap of the dissertation

I defend a novel *non-mechanistic* reading of Kant's doctrine of nature. The key to my reading is appreciating that Kant allows us, and in some ways *urges* us, to believe organisms exist in nature.

Part I of my dissertation analyzes the key concepts involved in my reading. In **Chapter 1**, I define purposiveness as a causality according to which inner principles, not outer principles, determine their effects. I show that this notion of purposiveness is general enough to extend to all kinds of purposiveness encountered in the *Critique of the Power of Judgment*, and I contrast it with the dominant conception of the term that depicts it as a "lawfulness of the contingent." **Chapter 2** analyzes the terms nature, mechanism, organism, and life. Most importantly, I show that the very concept of nature does not exclude the possibility of there being purposiveness in nature. In

[10] In a sense, the reading offered here is an elaboration upon Angela Breitenbach's recent suggestion that "Kant thinks that we can construe reason in nature only if we assume that nature itself is purposive for the development of reason. And this, in turn, requires that we assume nature has a teleological ground and is, as a result, ordered in its entirety according to relations of purposiveness" (2017, 252). What I add is that this presupposition takes the form of a *belief* – theoretical in some contexts (see Chapter 6) and moral in others (see Appendix II). Contrast Breitenbach's explanation with Eric Watkins' (2014), which purports that the systematic unity of organic nature is not presupposed but *produced* by reason's totalizing need to systematize

Chapter 3, I offer a novel interpretation of Kant's concept of life, one that helps us better envision what sorts of organisms could exist in nature and the principles of organic activity.

Part II turns from conceptual analysis to the questions of whether and how there is purposiveness in nature. In **Chapter 4** I consider the available answers to the question "Are there organisms in nature?" Most commentators argue that we merely judge that there are organisms in nature and that we can never know whether there really are. However, many of Kant's overt remarks about organisms contradict this standard line, revealing that this is not the *only* way to interpret him. In **Chapter 5**, I provide a close reading of the Antinomy of Teleological Judgment to show that Kant does not make organisms out to be merely a convenient fiction or a mental projection. **Chapter 6** contains a defense of my non-mechanistic interpretation of Kant's doctrine of nature. I first lay out various ways in which the text of the third *Critique* plainly contradicts and complicates mechanistic interpretations of it before explaining how belief that there are organisms in nature is not only possible but justified.

The **Epilogue** contains two appendices. **Appendix I** offers a non-mechanistic reading of the Methodology section of the *Critique of the Teleological Power of Judgment*. On my reading, belief in the organism is justified on *moral* grounds. Failure to positively believe in the existence of the organism compromises Kant's moral proof of the existence of God in the Methodology. **Appendix II** is a reflection on Kant's reception of Aristotelian teleology in the *Critique of the Teleological Power of Judgment*. Here I show that there are two ways of imagining how Kant could have interpreted Aristotle's teleology. If Kant read Aristotle as a *realist* about teleology, then Kant neglected to clearly address and critique Aristotle's teleology in the third *Critique*. If he read Aristotle as an *anti-realist* about teleology, this leaves open the possibility that the third *Critique* represents a critical rehabilitation of Aristotelian teleology.

Though Kant denies that we can cognize teleology in nature, we need not opt for a mechanistic construal of nature. A non-mechanistic reading makes better sense of Kant's remarks about the mechanical inexplicability of nature and certain natural products, revealing a much more nuanced understanding of nature in Kant than many have anticipated. Moreover, the non-mechanistic position makes sense of how human beings, which are not merely mechanistic actors, can exist in and influence nature. Ultimately, Kant does not affirm that mechanism gives us a complete picture of nature, for it cannot exhaustively explain the origins and the activities of organisms.

PART I

Chapter 1. What is purposiveness?

The main question animating our endeavor is the question of whether there can be any kind of non-mechanistic causality present in nature. The main form of non-mechanistic causality Kant discusses is purposiveness [*Zweckmäßigkeit*].

In this chapter, I provide an analysis of the concept of purposiveness in Kant's Critical philosophy. My analysis here shows that purposiveness is, above all else, a kind of causality. More specifically, purposiveness is causality that is driven by *inner* principles as opposed to *outer* principles.

The chapter proceeds as follows. In section 1, I discuss two important historical forerunners for Kant's concept of purposiveness – Baumgarten and Leibniz. Baumgarten is significant because, by introducing the notion of the nexus of utility, he carves out conceptual space for a kind of causality that is distinct in kind from material efficient causality but is not as cognitively robust as final causality, which involves an agent that represents their intentions to themselves. Leibniz is also significant because, in his *Monadology*, he demonstrates how inner principles can be causally efficacious. Kant differs from Baumgarten because he does not cash purposiveness out in terms of utility and differs from Leibniz because he does not posit the existence of infinite irreducible monads as bearers of inner principles, but Kant inherits the legacy left behind by both insofar as he leaves a substantive role to a non-mechanistic, inner-principle-driven form of causality in his philosophy. In section 2, I survey Kant's broader theory of causality and situate the concept of a causality in accordance with inner principles within it. In section 3, I survey every kind of purposiveness discussed in the *Critique of the Power of Judgment* to show that purposiveness just is a causality that has inner principles as its grounds. In section 4, I respond to a popular view in the literature, which states that purposiveness just is a "lawfulness of the contingent." Against the

commentators who assert this view, I argue that Kant only glosses certain forms of *objective* purposiveness as a "lawfulness of the contingent". What these commentators have uncovered is a definition of a species of the concept, not of the concept as such.

1. Kant's forerunners: Baumgarten and Leibniz on causality driven by inner principles

In this section, I provide important historical context for Kant's doctrine of purposiveness as a causality driven by inner, as opposed to outer, principles. As we shall see, Kant builds his doctrine of causality along the lines of Alexander Baumgarten's. For Baumgarten, causality is a category of metaphysics, pertaining to the branch of this science known as "ontology," or the study of being and its predicates. Since causality is fundamentally a metaphysical concept for both Baumgarten and Kant, we should think of purposiveness, which is a species of causality, as belonging to metaphysics as well. That is, to say of a thing that it is purposive is to say that it possesses certain causal powers and stands in particular causal relations to other things. This characterization of purposiveness may lead some to think that it is identical with either "utility" or "finality", both of which are kinds of causality in Baumgarten's *Metaphysics*. However, Kant's notion of purposiveness is unique. For Kant, the nexus of ends and the nexus of uses sit under purposiveness, the former set of concepts being species of the latter.

Kant is not the first thinker to carve out a place for a species of causality the grounds of which are inner principles in his metaphysics. In works such as the *Monadology*, Leibniz also posits the existence of substances that possess internal principles of change. To the extent that they have such internal principles, monads are considered entelechies, and living beings are fundamentally driven by their entelechies. While Kant is no doubt aware of these and other

important tenets of Leibniz's early 18th century metaphysics, his doctrine of purposiveness meaningfully modifies Leibniz's notion of internal principles as monadic entelechies.

1.1. Baumgarten's Metaphysics *and the place of causality within it*

For Baumgarten, causality is a category of ontology, and ontology is a branch of metaphysics. The very first section of his *Metaphysics* defines this term as the "science of the first principles in human knowledge" (§1). Ontology, more specifically, is "the science of the more general predicates of a being" (§4). If metaphysics seeks to give us a principled account of the most fundamental principles of human knowledge, ontology carries out the task of explaining what beings in general are and what predicates they contain. Baumgarten introduces the notion of causality as a category of ontology because causality gives us insight into what a being is and how it came to be. Before dissecting what causality is, what its various species are, and what it tells us about a being, we should first study a few more general concepts in Baumgarten's Ontology, such as ground, consequence, nexus, substance, and accident.

One of the most fundamental ambitions of Baumgarten's Ontology is to give us the tools not only to explain what things are, but *why* they are. For the sake of explaining why things come to be, Baumgarten introduces the key terms of ground, consequence, and nexus. Early on in Baumgarten's Ontology, we learn that a "GROUND is that from which it is knowable why something is" whereas that which has a ground is a "CONSEQUENCE and DEPENDENT on it [the ground]"; the connection of ground and consequence is a "NEXUS" (§13). Baumgarten mobilizes these terms when articulating a central principle of his Ontology, stipulating that "Each and every thing in every possible thing has a ground (§20); hence, every possible thing has a sufficient ground [i.e., a complete and total explanation of why that thing exists] (§21)" (§22). Now, from everything having a ground and every ground having a consequence which is dependent

upon it, it follows that "*Every possible thing is both a ground and a consequence* (§20, 23), and hence connected and rational (§19) in a double nexus (§14), knowable both a priori and a posteriori" (§24). So, we see that at the basis of Baumgarten's Ontology there lie the tools to explain why a thing is (i.e., a thing's ground) and the relation between any possible thing and that by virtue of which it exits (i.e., a nexus of ground and consequence).

Further along in his Ontology, Baumgarten distinguishes between substance and accident as follows: "A being either cannot exist except as a determination of another (in something else), or it can (§10). The former is an accident (a predicate or physical thing, cf. §50, whose being <*esse*> is belonging <*inesse*>, *sumbebekos*), and the latter a SUBSTANCE (a being *per se*, form, *entelecheia*, *ousia*, *hupostasis*, *energeia*), because it can exist, although it is neither in something else, nor the determination of something else" (§191). While accidents inhere in substance, only existing as determinations, attributes, modes, or relations of a substance (§195), substances subsist, or persist despite changes in determination, attributes, modes, and relations. From here, we may begin to see how the notions of ground, consequence, and nexus explain the dynamic between substances and their accidents. Substances, as beings that exist and persist despite changes in their determinations, explain why an accident has come into or out of existence. Substances *ground* their accidents, meaning that there is a nexus of substance and accident: "If accidents inhere in a substance, then there is some ground of inherence (§20), or POWER, IN THE BROADER SENSE (efficacy, energy, activity, §216), and a sufficient ground (§22). This [latter] is POWER IN THE STRICTER SENSE (and sometimes called simply POWER for the sake of brevity)" (§197). A substance, insofar as it possesses power in both the broad and strict sense, explains why some accidents and not others inhere in substance. In other words, substances are grounds of accidents,

which are their consequences, and the nexus of substance and accident is a relation of a substance exerting its power to produce some accident.

Baumgarten's ontological account of causality is constructed against the backdrop of these important concepts. He makes the following remarks when defining causality: "Between the cause and what is caused there is a NEXUS (§307, 14), which is called CAUSAL, and insofar as it is attributed to a cause, it is called CAUSALITY, whereas insofar as it is attributed to what is caused, it is called DEPENDENCY" (§313). A cause is what Baumgarten calls the "PRINCIPLE OF BECOMING (of generation)" (§311). Causality, in other words, describes a nexus, or a relation, between a causal ground and its effect:

> That which contains the ground of another is its PRINCIPLE. That which depends on a principle is something FOUNDED. The principle of existence is a CAUSE and the thing founded by a cause is the CAUSED. That which is not able to exist except as caused by another being posited outside of it is a BEING FROM ANOTHER <*ENS AB ALIO*> (dependent). However, that which is able to exist even if it is not caused by another being posited outside of it is a BEING FROM ITSELF <*ENS A SE*> (independent). (§307)

A causal principle is that which serves as the "principle of existence" of that which it causes. Baumgarten also makes a fundamental distinction between that which only exists if it is caused by something external (*ens ab alio*) versus that which is able to exist even if it is not caused by something external (*ens a se*). In general, then, causality describes a nexus, or a relation, between the principle of a thing's existence and its coming to be. Sometimes, the principle of change is outside of the being changed, in which case the causal changes are dependent upon an external principle. In other cases, a being is "independent", or capable of being the cause of its own changes.

Now, after having introduced the general notion of causality into his Ontology, Baumgarten breaks down various species of causality. One such species is the "nexus of utility": "USE is the actualization of utility. ABUSE is either apparent use or use in which what is useful perishes. Since one can know from the useful the perfection of that for which it is useful (§336, 100), the useful

and that for it can be useful are connected, and their nexus can be called the NEXUS OF UTILITY" (§338). The notion of a "nexus" is built into the fabric of causality. Indeed, causality is fundamentally a nexus between cause and effect, or a relation between the two terms, according to which cause grounds the existence of effect. Likewise, there is a nexus between the useful and that for which it can be useful. Baumgarten continues,

> If someone uses something useful, then through this, the perfection of another is actualized (§338, 100), and the useful, through use, becomes the cause of the perfection of that for which it is useful (§307). And this causal nexus can be called the NEXUS OF USE. When someone uses something, that thing is useful (§336, 57) and nobody uses what is entirely useless (§338, 58). However, some useful things are in want of use (§59) and hence something that nobody uses is useful nonetheless (§60). (§339)

"The useful" is a cause, meaning it beings about the existence of something else, its effect. The effect brought about by the useful is "the perfection for which it is useful". The nexus describes the relation between the useful as the cause of the existence of a thing's perfection. Thus, to say that sunlight is useful for the growth of a tree is to say that exposure to sunlight grounds or explains the existence of a certain perfection, namely, the tree's growth.

Baumgarten's conception of a "nexus finalis", or a causal relation of ends, is derivative upon his notions of use, utility, and the "nexus of use":

> When one uses or abuses something for the sake of actualizing what seems good to oneself, then this very thing, which seems good to the agent, is called the END <*FINIS*> (cf. §248). The causes of the end, or those things that the agent can use or abuse for the sake of the end, are called the MEANS (destined, limited (cf. §248), remedies), and the representation of the end is called the INTENTION. Now, the end is the principle of use or abuse (§338, 307), and hence is the final cause (§338, 307). (§341)

End and final causality seem to be a species of use and the nexus of utility. More specifically, an end is "what seems good to oneself," suggesting that an end is only proper to beings to which

things can seem a certain way (i.e., beings that represent). But an end is "caused", or brought into existence, by use of a "means". Since a means is that of which an agent makes use for the sake of realizing an end, it appears that we could classify the *nexus finalis* as a kind of *nexus utilitatis*. That is, a "means" is just one kind of use and an "end" that for which a means is useful. So, "The causal nexus of means and ends is the FINAL NEXUS" (§343), and the "final nexus" is just a "nexus of utility" involving an agent to whom certain ends appear good and certain means appear conducive to the realization of said ends.

On top of all this, Baumgarten introduces a "representation of the end" as an intention, carving out what seems to be an even more specific class of end-directed activity. He adds, "The grounds of an intention in the one intending are called the IMPELLING CAUSES. The end is the effect of the action and the means that the agent uses or abuses (§341, 319). Hence, the complete end is equal to the action and the means. The means and the action are equal (proportional) to the complete end (§331). Seizing the occasion (§323) and removing impediments (§221) are means (§341)" (§342). So impelling causes are responsible for bringing about intentions. But the intention itself seems to be the principle of the action and the means an agent uses to complete their end. We might say that an agent's intention causes them to use a means for realizing their end.

In sum, a causal nexus describes the relation between a causal principle and its effect. The relation between these two terms in the nexus is one of existence: A causal principle explains how its effect was generated or came into existence. One may wonder why the empty bucket they left in their backyard is now filled with water. If the answer is that it rained overnight, the downpour is the causal principle that explains why the bucket is filled to the brim with water the next morning. A nexus of utility makes the use of something the cause of a thing's perfection. For instance, a tree uses minerals in the soil to nourish itself. In this case, the minerals in the soil which

it absorbs through its roots are *useful* for its efforts to nourish itself, contributing to its perfection in this way. A final nexus brings means and ends into the picture, where an end is that which seems good to an agent and a means that which is useful for the actualization of ends. Moreover, this sort of nexus involves "intentions" or representations of ends. My intention to make a pizza leads me to acquire dough, tomato sauce, cheese, and pepperoni, all of which are means requisite for making the pizza. As such, my representation of the pizza as an end serves as the impelling cause, guiding my purchases at the grocery store and each step of my efforts to make the pizza and hopefully resulting in the realization of the finished product. When discussing the causal nexus in general and the nexus of utility, Baumgarten makes no such explicit appeal to agents, what seems good to them, or representations. Thus, a final nexus is distinct from a nexus of use because it involves a representation (an intention) as a cause of the reality of actions the agent uses to bring about an end.

1.2. Leibniz on causality driven by inner principles

In his 1714 *Monadology*, Leibniz maintains that "the monad's natural changes come from an *internal principle*, since no external cause can influence it internally" (*Monadology* 11). By this means, he designates a role for a non-mechanistic causality driven by inner principles that factors into his conception of the living being, a concept that, I will show, Kant draws upon and develops in his own account of the organism. Before getting into the similarities and dissimilarities between Kant and Leibniz, let us briefly turn to the *Monadology* and home in on what Leibniz takes an inner principle driven causality to be.

Monads persist despite the fact that they undergo alterations in their states. In general, "The passing state which involves and represents a multitude in the unity or in the simple substance is nothing other than what one calls *perception*" (*Monadology,* 14). That is, perception represents a

change in the state of a monad. On top of this, Leibniz claims that simple substances, or monads, have an "internal principle" of change. They are impenetrable, or incapable of being acted upon from without. Instead, their passage from one state to another, or the emerges of the monad's various perceptions, is conducted by the monad tending towards "appetitions," or, as Leibniz remarks, "The action of the internal principle which brings about the change or passage from one perception to another can be called *appetition*" (*Monadology*, 15). Changes in the state of a substance are brought about as a result of in-built appetites, which drive a thing to alter its state in a particular way and not some other.

> Such appetitive changes, importantly, are "inexplicable in terms of mechanical reasons": Moreover, we must confess that the *perception*, and what depends on it, is *inexplicable in terms of mechanical reasons*, that is, through shapes and motions. If we imagine that there is a machine whose structure makes it think, sense, and have perceptions, we could conceive it enlarged, keeping the same proportions, so that we could enter into it, as one enters into a mill. Assuming that, when inspecting its interior, we will only find parts that push one another, and we will never find anything to explain a perception. And so, we should seek perception in the simple substance and not in the composite or in the machine. Furthermore, this is all one can find in the simple substance—that is, perceptions and their changes. It is also in this alone that all the *internal actions* of simple substances can consist. (*Monadology,* 17)

By specifying that there are "*internal actions* of simple substances" that are distinct in kind from mechanical activity, Leibniz here distinguishes himself from the Newtonians of the time, who would have tried to explain all motion in terms of mechanism. Instead, to explain the internally impelled action of monads, we must understand them as "entelechies", writes Leibniz: "One can call all simple substances or created monads entelechies, for they have in themselves a certain perfection (*echousi to enteles*); they have a sufficiency (*autarkeia*) that makes them the sources of their internal actions, and, so to speak, incorporeal automata" (*Monadology,* 18). These passages label certain monads "entelechies", or, literally construed, things which have their ends (*teloi*) in them. By virtue of possessing their ends, monads are capable of acting as the "sources of their

internal actions." By contrast, if we are to understand the activity of mere matter as mechanical, then we are explaining matter as that which changes on the basis of some principle external to it, as something that could not be the source of its own actions.

Besides drawing a distinction in kind between monads *qua* entelechies and mere machines, Leibniz distinguishes between various grades of entelechy and entelechic activity. "I think that the general name of monad and entelechy is sufficient for simple substances which only have perceptions, and that we should only call those substances *souls* where perception is more distinct and accompanied by memory" (*Monadology,* 19). The perceptions of a monad or entelechy seem to be even more crude than "sensations", or perhaps what we might call representations. "Souls" are those substances capable of having "distinct" perceptions accompanied by memory. Monads or entelechies in general need not possess this level of distinctness in their perceptions. Leibniz likes the perceptions of a sub-psychic monad to "when we faint or when we are overwhelmed by a deep, dreamless sleep" (*Monadology,* 20). However, Leibniz assures us that the soul of a human is "something more." While most of the time, we humans are like beasts and our perceptions come about as a result of our memory of previous perceptions. "But the knowledge of eternal and necessary truths is what distinguishes us from simple animals and furnishes us with *reason* and the sciences, by raising us to a knowledge of ourselves and of God. And that is what we might call the rational soul, or mind, in ourselves" (*Monadology,* 29).In the above passages, we see Leibniz developing the metaphysical resources to distinguish between degrees of internal activity. Some entelechies are driven by indistinct perceptions, and these are the crudest. However, other more sophisticated beings have memory. Still other beings have reason and the sciences, giving them a "rational soul" and presumably allowing them to determine themselves in accordance with the "eternal and necessary truths" of reason.

Leibniz introduces various classes of entelechy and goes on to define living beings as entelechy-body composites. This suggests that there are grades or classes of living being, too, divvied up the sophistication of the soul they possess:

> The body belonging to a monad (which is the entelechy or soul of that body) together with an entelechy constitutes what might be called the *living being*, and together with the soul constitutes what is called an *animal*. Now, the body of a living being or an animal is always organized; for, since every monad is a mirror of the universe in its way, and since the universe is regulated in a perfect order, there must also be an order in the representing being, that is, in the perceptions of the soul, and consequently, in the body in accordance with which the universe is represented therein. (*Monadology,* 63)

Here, Leibniz distinguishes between kinds or grades of "living being." On the one hand, living beings in general are simply bodies coupled with a monad, where the monad is an entelechy. Entelechies "have in themselves a certain perfection" and are capable of serving as the "sources of their internal actions" (*Monadology,* 18). Entelechies have indistinct or confused perceptions, or passing states which "involve and represent a multitude in the unity" (*Monadology,* 14). Changes in perception are not explicable in mechanistic terms (*Monadology,* 17); that is, we cannot appeal to the influence of prior, external powers to explain a change in perception or the current state of an entelechy. Rather, the action of an entelechy is guided by its "appetition", by virtue of which an entelechy tends to one perception or another, however imperfectly (*Monadology* 15).

On the other hand, souls have more distinct perceptions, sometimes guided by memory and in other cases guided by reason. Souls belong to animals, who are capable of, at minimum, sensation. Both souls and entelechies alike possess an organization that is inexplicable in purely mechanical terms.

> Thus each organized body of a living being is a kind of divine machine or natural automaton, which infinitely surpasses all artificial automata. For a machine constructed by man's art is not a machine in each of its parts. For example, the tooth of a brass wheel has parts or fragments which, for us, are no longer artificial things, and no longer have any marks to indicate the machine for whose use the wheel was intended. But natural machines,

> that is, living bodies, are still machines in their least parts, to infinity. That is the difference between nature and art, that is, between divine art and our art. (*Monadology,* 64)

Leibniz thinks that the universe is a plenum replete with monads, which are the only simple substance. For living beings, this ends up meaning that, while each body consists of infinite many monads, there is a hierarchy of monads: "we see each living body has a dominant entelechy, which in the animal is the soul; but the limbs of this living body are full of other living beings, plants, animals, each of which also has its entelechy, or its dominant soul" (*Monadology,* 70). The view that monads are infinite in number combined with the claims that monads *qua* entelechies are the principle of life and living beings consist of a hierarchy of innumerable entelechies commits Leibniz to an apparent pan-vitalism: "Thus there is nothing fallow, sterile, or dead in the universe, no chaos and no confusion except in appearance, almost as it looks in a pond at a distance, where we might see the confused and, so to speak, teeming motion of the fish in the pond, without discerning the fish themselves" (*Monadology,* 69). Though I believe that Kant echoes and builds upon the Leibnizian (*cum* Aristotelian[11]) ideas that living beings possess entelechies which serve as an internal principle of their organization, he is certainly intent to avoid some of Leibniz's metaphysical excesses in the *Monadology*. For instance, whereas Leibniz infers the existence of God from his application of the principle of sufficient reason to contingent, mechanically inexplicable truths in nature, Kant is careful to say that the possibility of such a proof is merely speculative. We also see in the *Third Critique* that Kant is not committed to a pan-vitalism: There are powers other than the internal, formative power endemic to organized beings. Unlike Leibniz of the *Monadology*, Kant believes that there is a difference between live and dead matter and that Newtonian mechanics can explain the motion of dead matter. Kant also certainly disagrees with

[11] Aristotle describes the activity of a living thing as similarly dependent upon its "first actuality" (*entelecheia*) in *De Anima* II.1 412b4-6.

Leibniz's preformationist thesis that organic bodies were produced from "seeds" which were "already there" before the conception of the organic body (*Monadology,* 74-5).

Ultimately, Kant shall agree with the Leibnizian theses that "Souls act according to the laws of final causes, through appetitions, ends, and means"; "Bodies act according to the laws of efficient causes or of motions"; and even that "these two kingdoms, that of efficient and that of final causes, are in harmony with each other" (*Monadology,* 79). However, Kant shall depart from Leibniz insofar as the former does not endorse a principle of pre-established harmony between all interacting substances. In short, Kant shall reject the metaphysical excesses of the Leibnizian position in favor of a more modest, but still metaphysical, account of living activity. Living activity is a kind of purposive activity, since purposive activity is a causal activity according to which an internal power determines a substance's change in state. As Leibniz states, such activity can proceed in accordance with "appetitions, means, and ends." The principles of entelechies can be confused or obscure, those of animal souls more distinct and precise. We shall see that Kant's account leaves room for a comparable distinction between living beings whose principle of purposive activity is more crude than living beings capable of relatively sophisticated self-determination. Like Leibniz, Kant agrees that living things are mechanically inexplicable in important respects, famously adding that there will never be a Newton of a blade of grass who explains purposiveness purely in terms of mechanism.[12] Let us now turn to Kant's account to better grasp how he is adapting the abovementioned features of Baumgartian and Leibnizian metaphysics into his discussion of purposiveness during the Critical period.

[12] For a more thorough discussion of the mechanical inexplicability of life, see Chapters 3-5 directly below.

2. Situating purposiveness within Kant's theory of causality

In this section, I lay out the place of purposiveness within Kant's broader theory of causality. Purposiveness is a causality that is driven by *inner* as opposed to *outer* principles. The first part of this section gives an overview of Kant's theory of causality. I then turn to Kant's *Critique of the Power of Judgment* to show what precisely Kant means when he makes purposiveness out to be a causality driven by inner principles.

2.1. Kant's doctrine of causality

Kant's general doctrine of causality is consistent with Baumgarten's, although it gives the language of substance and accident a more pronounced role in all kinds of causality. Causality in Kant is typically thought of in terms of causal powers exercised by one substance upon another.[13] In the *Metaphysik Mrongovius*, Kant distinguishes between substance and accident as follows: "That which exists without being the determination of another is substance; that which exists only as determination is accident" (*LM* 29:770). He adds that we can think of substance as that which is left behind when we strip an existing thing of all its accidents, although we have no acquaintance with a substance in which no accidents inhere (*LM* 29:771). While we can only cognize a substance through its accidents, "accidents cannot exist other than in the substance (*LM* 29:796).

Causality therefore describes the process by means of which one substance exercises a causal power that alters the states or the accidents inhering in another substance. Eric Waktins writes that causal interaction between substances occurs when one substance provides the "ground that determines the state of another substance…through an indeterminate activity that is incapable of ever becoming determinate in itself" (2005, 231). A causal interaction, in other words, occurs when one substance exercises a causal power upon another, thereby altering the state of the

[13] See Ameriks 2000, Dyck 2014, Tolley 2021, and Brink 2022. For some responses to this trend, see Kitcher 2017.

substance it affects. These causal powers establish a "primitive relation 'in between' substances and their determinations" (2005, 13), and they are reducible neither to substance nor their determinations. Crucially, on Kant's account, a ground is that power by virtue of which a substance has been altered; a ground therefore explains or accounts for the alteration one substance has effected upon another. Moreover, the ground or power that brings about this alteration inheres in the substance: "The basic idea of a model of causality for which grounds are central is that one substance determines the successive state of another by means of an unchanging ground that is part of its essential nature" (2005, 244). Substances have indeterminate, unchanging grounds or powers that are responsible for (and consequently explain) the effect they bring about. When I rest my head on a pillow, I create a dent in the pillow. The weight, size, and shape of my head is the ground that explains the depth and circumference of the dent in my pillow.

Along these lines, we should also think of the causality of a substance as an activity of the substance (see Watkins 2005, Ch. 4). In the same lecture transcripts, Kant defines the activity of a substance as follows: "A substance, insofar as it contains the ground of that which belongs to the being of one thing, acts <*agirt;* G: *handelt*>;…substance, insofar as its accidents inhere, is in action, and it acts insofar as it is the ground of the actuality of the accidents" (*LM* 29:773). Substance, Kant says, acts just as long as it contains the ground that explains why certain accidents inhere in it or another substance. A ground, as we saw above, is a power that is part of the substance's essential nature and determines the state of another substance. It is ultimately the exercise of this power that accounts for why a substance has the accidents that it does.

Kant also appears to think that there are outer grounds, principles, or powers as opposed to inner grounds, principles, or powers by means of which one substance can alter the determinate states of another. Passivity, or suffering, is that kind of activity of a substance by means of which

it is determined through an "outer power": "What then is genuine passivity <*passio*>? The acting substance <*substantia agens*> determines the power of he substance being acted upon <*substantiae patientis*> in order to produce this accident, therefore all passivity <*passio*> is nothing more than the determination of the power of the suffering substance by an outer power" (*LM* 29:823). In a seemingly paradoxical twist, Kant thinks of passivity as a kind of activity. A passive substance comes to express a power of its own, but that power could not have been expressed unless another, "outer" substance acted upon it. He elects to illustrate passivity with an intriguing example: "E.g., a representation of a trumpet sound inheres in me through an external power, but not alone, for had I no power of representation <*vim representativam*> then it could be sounded forever and I could not have a representation. From the union of one substance with another an effect comes about, namely, the representation of the trumpet sound" (*LM* 29:882). Here, Kant appears to be suggesting that the sound resounding from a trumpet is an "external power" that exerts its influence upon me, who hears the sound of the trumpet. However, I am not mere receptivity, as I possess a "power of representation". This power allows me to formulate a (fortunately for me) finite representation of the trumpet sound. And so, the effect, a representation of the trumpet sound, is actually the result of the activity of my power of representation. That power, nonetheless, was itself effected by an "external power": i.e., the blow of the trumpet. Passivity is still an activity because the accident – in this case, the representation of the trumpet sound – inheres in me because of the activity of a power I possess. It is mere passivity, and not something more, because the exercise of my power of representation alone, without the "external power" of the trumpet blast itself, would not have been sufficient to produce my representation of the trumpet blast.

In contrast to this activity induced by an external power, Kant also references an "act <*actus*> of spontaneity that cannot proceed from an outer principle" (*LM* 28:285). Kant's remarks

on this form of activity are much more compressed and do not come with the benefit of an example. What we can infer is that such activity results from the causal powers intrinsic to a substance alone. While changes on the basis of an outer ground or principle require us to appeal to the powers of another foreign substance, attributing changes to a substance on the basis of an *inner* ground or principle means we need not appeal to any foreign substance. Perhaps, to use Kant's previous example in this context, one could picture an individual using their own power of representation to imagine a trumpet sound. In this case, there is no trumpet blast acting as the external power that in turn determines the state of my power of representation. Rather, my power of representation is acting of its own accord, determining its own state, and thereby altering itself.

2.2. Kant on purposiveness as a kind of causality

With this context in place, we are now in a better position to appreciate what it would mean to say that purposiveness is a kind of causal activity that "cannot proceed from an outer principle." Indeed, Kant puts together the third *Critique* for the sake of giving this form of causal activity a place in his system. With his account of purposiveness, Kant reveals to us the manifold ways in which substances spontaneously act and produce real consequences in the world on the basis of this pure self-activity.

When seeking an account of purposiveness as such, one would find it natural to turn to §10 of the *Critique of the Power of Judgment*, titled "On purposiveness in general." Kant begins that section by giving a definition of an "end" [*ein Zweck*] in accordance with its "transcendental determinations" (or, "without presupposing anything empirical"). From this perspective, "an end is the object of a concept insofar as the latter is regarded as the cause of the former (the real ground of its possibility)" (*CPJ* 5:220). So Kant defines an end as an object the concept of which has served as the "real ground" of its possibility. Purposiveness, then, simply is the "causality of a

concept with regard to its **object**" (ibid). It is a term that picks out the unique form of causality according to which "the object itself (its form or its existence) as an effect is thought of as possible only through the concept" of an effect.

Deploying some of the conceptual machinery laid out above, to call purposiveness a causality is to say that it is an activity by means of which a power exercised by a substance alters the state inhering in another. A ground is the particular causal power that explains the inherence of some accident in a substance. In the case of purposiveness, a *concept* of an effect appears to be the "real ground" of the possibility of the effect. We saw above that a substance that acts is either passive or spontaneous. A passive substance acts because it has been affected by some external power. However, in the case of purposiveness, it does not seem right to say that the acting substance is passive. A concept is not the sort of principle that emerges in a substance as the result of the influence of some external power. Rather, individuals generate and use concepts on their own. Thus, Kant's definition of purposiveness in this section should lead us to believe that purposiveness is a kind of causality according to which a concept serves as the inner, as opposed to outer, principle grounding the reality of an object.

Kant's gloss on purposes and purposiveness here might also lead us to think that an end, which serves as the causal ground of a purposive causality, is always going to be a concept or at the very least a representation of some distant desired state. Immediately following this paragraph, Kant goes on to define the (presumably human) will as "the faculty of desire, insofar as it is determinable only through concepts, i.e., to act in accordance with the representations of an end" (*CPJ* 5:220). The will is the faculty of desire set in motion by its ends, we might say.

Nonetheless, we will see directly below that there are certain forms of purposive causality that need not involve representations at all. In other words, it is possible to explain something

purposively without designating a concept or representation of an effect the real ground of its cause's possibility. And we shall see later, when discussing the *formal subjective* purposiveness encountered in certain judgments of taste, that some forms of purposiveness do not even involve purposes. Instead, formal subjective purposiveness seems to be a causality according to which a non-empirical feeling of pleasure grounds our ability to maintain a certain mental equilibrium and "linger" upon the beauty of some object. This exhibits a purposive causality the causal ground of which is not the concept of an object, but a feeling. Teleological judgments, in contrast, require us to attribute purposes to nature and products of nature. When reflecting upon the activity of a tree, for instance, we notice that it reproduces, and we explain its capacity to reproduce as an expression of its instinct to preserve itself. The tree reproduces *for the sake of* preserving its species. Of course, while it is legitimate to explain the tree as acting for the sake of its self-preservation, thereby attributing a purposive causality to it, it does not seem legitimate to say that a concept is the ground of the tree's purposive activity. According to Kant, trees cannot have any concepts whatsoever. The cases of formal subjective purposiveness and inner material objective purposiveness give us reason to believe that purposiveness is a kind of causality that sometimes does invoke a concept of an end or a representation of an effect as its causal ground, but these options do not exhaust what all can serve as the ground of a purposive causality.[14]

Despite Kant's including the notions of concept and representation in many of his basic characterizations of purposiveness, I propose that we think of purposiveness in general along much broader lines. Purposiveness simply is that causality according to which an inner principle determines the state of a substance. Sometimes, the inner principle will be a concept, at other times an idea, at other times a feeling, and so on. However, what all inner principles share in common is

[14] I return to a more thorough discussion of what non-conceptual inner principles of purposive activity may look like in Chapter 3.

that they are activities that do not depend upon the influence of an external power. Instead, purposiveness is a kind of causality according to which a substance determines itself to act by means of a principle that emanates from its nature. The outcome of this activity is the realization of an effect that was merely potential before the exercise of that causal power. In this sense, purposive causality is productive, as a purposive actor brings about the reality of some state by merely projecting it before them.

On my account, purposiveness is a causality according to which inner principles ground the reality of some state of a substance. These inner principles are powers that emanate from the essence of a substance and explain and precipitates a real consequence on their own, although the inner principles in question are merely potential until their effects have been realized. All forms of purposiveness we encounter below bear the characteristic marks of this unique form of causality. A subjectively purposive causality takes a feeling of pleasure, sometimes empirical and sometimes pure, as the ground of its effect. An objectively purposive causality has a concept as the ground of its effect.

From what has been said so far, we can see that Kant does not understand the "nexus of use" and the nexus of purposiveness as coextensive concepts. Rather, usefulness, as it is discussed in the *Critique of the Power of Judgment*, belongs to a species of real objective purposiveness, which is itself a species of objective purposiveness, which is itself a species of purposiveness, which is itself a species of causality. We can judge a thing to possess an objective and material purposiveness in one of two ways: "either if we regard the effect immediately as a product of art or if we regard it only as material for the art of other possible natural beings, thus if we regard it either as an end or as a means for the purposive use of other causes. The latter purposiveness is called usefulness (for human beings) or advantageousness (for every other creature), and is merely

relative; while the former is an internal purposiveness of the natural being" (*CPJ* 5:367). The notion of usefulness is much further down Kant's conceptual taxonomy of causality than Baumgarten's. While Baumgarten seems to think of utility as among the most generic species of causality and identifies the *nexus finalis* as a particular kind of *nexus utilitatis*, Kant seems to invert this ordering altogether. A nexus of use is a particular kind of nexus of ends. Moreover, a nexus of ends is a particular kind of purposive nexus, and a purposive nexus is one kind of causal nexus. In short, we cannot identify purposiveness with usefulness, since, for Kant, usefulness is involved in just one variety of purposive relation.

Instead, when Kant introduces purposiveness to us as a form of causality, we should think of it as an addendum to an otherwise Baumgartian metaphysics of causality. Baumgarten specifies that there is a kind of causality according to which the causal principle is *outside* that the existence of which it explains. Likewise, there are causal principles *within* that the existence of which they explain. Purposiveness in general is the name Kant gives to the latter species of causality in the *Critique of the Power of Judgment*.

Moreover, purposiveness is a species of causality more generic than the *nexus finalis* insofar as Kant leaves room for a kind of purposiveness that does not involve ends at all. Thus, the *nexus finalis* is just one species of purposive nexus in Kant's metaphysics. When, in §10 of the *third Critique*, Kant defines purposiveness as the causality of a concept with respect to its object, he adds the phrase "*forma finalis*" next to the key term in brackets. Above, we see that both Baumgarten and Kant admit a *nexus finalis* into their metaphysics, according to which an intention, or a representation of an end, serves as the impelling cause that determines which means an agent will pursue for the sake of realizing their end. A *forma finalis* is appreciably different from a *nexus finalis*, however. A *nexus finalis* is a relation of cause and effect such that a means brings about an

end. *Forma finalis* merely refers to structure or the form of this causality – a causality that is suited to ends or purposes but need not involve them. Indeed, Kant makes sure not to reduce purposiveness to a mere *nexus finalis*, or causal relation that by definition involves ends, because there are kinds of purposive activity that do not involve ends at all. The term "*forma finalis*" describes the structure of purposive activity, which we see instantiated in final causality, according to which the representation of an end grounds the realization of that end; however, the structure of purposive causality outstrips the means-end relation definitive of final causality. Final causality is a species or an instance of purposiveness.

What the language of *forma finalis* shows us is that we should think of purposiveness as a causal nexus that is *amenable to* determination by ends or purposes, but need not involve ends or purposes. This is precisely why Kant thinks that a purposiveness without purpose is not an utter contradiction in terms. Later, when indexing the varieties of purposiveness catalogued by Kant, we shall see why and how it is possible for there to be purposive causalities that do not involve ends. For now, suffice it to say that purposiveness describes a causal structure according to which inner principles serve as the grounds determining their consequences, and purposive inner principles are only ends in some cases.

Thus, to call purposiveness a causality is to say that it is an activity by means of which a power exercised by a substance alters the state inhering in another. A ground is the particular causal power that explains the inherence of some accident in a substance. In the case of purposiveness, a *concept* of an effect is the "real ground" of the possibility of the effect. We saw above that a substance that acts is either passive or spontaneous. A passive substance acts because it has been affected by some external power. However, in the case of purposiveness, it does not seem right to say that the acting substance is passive. A concept is not the sort of principle that emerges in a

substance as the result of the influence of some external power. Rather, individuals generate and deploy concepts on their own. Kant's definition of purposiveness in this section should lead us to believe that purposiveness is a kind of causality according to which *inner*, as opposed to outer, principles ground the reality of an object. However, the inner principles or grounds of purposiveness are not always concepts.

2.3. Taking stock

Above, we have seen that purposiveness is a kind of causality, and this understanding of purposiveness reveals some continuities and other discontinuities between Kant's metaphysics and the metaphysics of the period, as exemplified by Baumgarten and Leibniz. Generally speaking, Kant's account of causality is consistent with and builds upon Baumgarten's. To Kant, causality is a nexus, or a relation, between a substance as ground and determinations of a substance as its consequences. Like Baumgarten, Kant thinks of substances as things that possess powers to alter the states of other substances. Such principles of change can be either external to the substance or internal to it. Kant conceives of purposiveness as causal activity on the basis of inner principles. Insofar as this category of causality is more generic than causalities involving ends and uses, Kant is modifying Baumgarten's metaphysics with his doctrine of purposiveness.

Furthermore, while this construal of purposiveness might incline us to read Kant as straightforwardly adopting the metaphysics of Leibniz's *Monadology*, we see that there are key differences between Kant and Leibniz. For one, Kant does not think of simple substances as impenetrable, incorporeal monads. Moreover, he does not think that we can deduce the existence of God from the existence of monads. He does not subscribe to the pre-formationist and pan-vitalist theses Leibniz espouses in the *Monadology*. However, Kant does seem to draw inspiration from Leibniz in two regards. For one, he thinks that substances have internal principles of activity and

that this activity is not reducible to the external-principle-driven activity characteristic of machines. Two, Kant thinks that this non-mechanistic, internally sourced activity is definitive of living beings We shall see in the coming sections of this chapter and subsequent chapters that Kant's definitions of the organism and life fundamentally involve purposiveness. For now, I move on to demonstrating the validity of this definition of purposiveness by showing that it is consistent with *every* species of purposiveness presented in the *Critique of the Power of Judgment*.

3. The varieties of purposiveness

In this section, I index all of the various species of purposiveness to show that they are consistent with our understanding of purposiveness as a kind of causality driven by inner, as opposed to outer, principles (3.1 and 3.2).[15] After, I address a few interpretations of purposiveness that erroneously take Kant's gloss of the concept as a "lawfulness of the contingent" to be specifying the main definition of the term (section 4).

3.1. Subjective purposiveness

In his analysis of the concept of purposiveness, Kant proceeds as usual, establishing divisions of the main concept and sub-divisions within each division. The first, most basic division under purposiveness in general is that between subjective and objective purposiveness. The main distinguishing feature of subjective purposiveness, on my interpretation, is that it does *not* make a concept the ground of purposive causality. Objective purposiveness, we shall see, does make a concept the ground of its causality. There are two further subdivisions of subjective purposiveness that I discuss below: *material* subjective purposiveness, which has an empirical feeling of pleasure as its ground and brings about judgments of agreeableness, and *formal* subjective purposiveness,

[15] At the end of this chapter, you will find a table depicting the various species of purposiveness (see *Figure 1*).

which makes a non-empirical feeling of pleasure the ground of its causality and brings about judgments of beauty.

In a passage from the section "On the aesthetic representation of the purposiveness of nature", Kant's explanation of what allows us to deem a natural object purposive may clue us into the structure of subjective purposiveness. This particular kind of purposiveness is only present if we connect our representation of an object with a "feeling of pleasure":

> the subjective aspect in a representation **which cannot become an element of cognition at all** is the **pleasure** or **displeasure** connected with it; for through this I cognize nothing in the object of the representation, although it can well be the effect of some cognition or other. Now the purposiveness of a thing, insofar as it is represented in perception, is also not a property of the object itself (for such a thing cannot be perceived), although it can be derived from the cognition of things. Thus the purposiveness that precedes the cognition of an object, which is immediately connected with it even without wanting to use the representation of it for a cognition, is the subjective aspect of it that cannot become an element of cognition at all. The object is therefore called purposive in this case only because its representation is immediately connected with the feeling of pleasure; and this representation itself is an aesthetic representation of the purposiveness. (*CPJ* 5:189).

In this passage, Kant is at pains to distinguish any representations by means of which I cognize an object (i.e., an intuition or a concept) from the feeling of pleasure and displeasure. The latter mark the "subjective aspect" of a representation and, while they can be the "effect of a cognition", cannot "become an element of cognition at all." When we attribute purposiveness to a thing without "wanting to use the representation of it [the thing's purposiveness] for a cognition", we are picking up on the subjective element of a thing's purposiveness. In this case, the thing is purposive because it is "immediately connected with the feeling of pleasure." In other words, when we make an *aesthetic* judgment about the purposiveness of nature, that judgment reveals a purposiveness that is somehow tied to the feeling of pleasure, and this feeling of pleasure has nothing to do with our cognition of nature and the kinds of representation that contribute to cognition. (Indeed, he appears to be suggesting that this feeling of pleasure or displeasure may not be representational at all.)

The first edition introduction to the *Critique of the Power of Judgment* contains an even more direct line on the relationship between subjective purposiveness and the feeling of pleasure. There, Kant states that "the representation of a subjective purposiveness of an object is identical with the feeling of pleasure" (*CPJ* 20:228). The capacity to "judge only about the subjective purposiveness (not about the perfection) of the object" is none other than the "faculty of aesthetic reflection" (ibid). So, we might say, our capacity to aesthetically judge is that which allows us to not only represent the subjective purposiveness of some object but to feel pleasure (or displeasure) at all.

While the passage above reveals that feelings of pleasure and displeasure factor into our subjective appraisal of a thing's purposiveness, Kant does not explain how pleasure and displeasure themselves serve as purposive causal principles until the body of the *Critique of the Aesthetic Power of Judgment*. When we who judge make judgments of taste, we ourselves exhibit a variety of subjective purposivenesses. The first paragraph of the body of the *Critique* announces as much: "In order to decide whether or not something is beautiful, we do not relate the representation by means of understanding to the object for cognition, but rather relate it by means of the imagination (perhaps combined with the understanding) to the subject and its feeling of pleasure or displeasure. The judgment of taste is therefore not a cognitive judgment, hence not a logical one, but is rather aesthetic, by which is understood one whose determining ground **cannot** be **other than subjective**" (*CPJ* 5:203). A judgment of taste "relates" our representation of an object to the "subject and its feeling of pleasure or displeasure." More directly, the "determining ground" of this judgment is a subjective one. As it turns out, the special subjective determining grounds for judgments of taste is the feeling of pleasure or displeasure, which itself "grounds an entirely special faculty for discriminating and judging that contributes nothing to cognition" (*CPJ*

5:204). The structure of aesthetic judgments of taste is such that the feeling of pleasure or displeasure grounds the very ability to make such judgments.

I characterize subjective purposiveness as a causality according to which a *feeling*, which is non-conceptual in the sense that it is not a general representation of the understanding, serves as ground. Depending on the kind of feeling that serves as a ground (i.e., whether that feeling is empirical or pure) will determine the kind of judgment it produces as its output. And whether we make a judgment of agreeableness or beauty, such judgments attribute a predicate to an object – an aroma is agreeable and a piece of music is beautiful. Therefore, subjective purposiveness takes a mere feeling of pleasure as the ground of an object's beauty or agreeableness.[16]

3.1.1. Material subjective purposiveness

If an *empirical* feeling of pleasure or displeasure grounds our judgment that an object is agreeable or disagreeable, the judgment of agreeableness is the result of a *material* subjective purposive causal process. Kant announces a division between empirical and pure aesthetic judgments along the following lines in the first paragraph of §14: "Aesthetic judgments can be divided, just like theoretical (logical) ones, into empirical and pure. The first are those which assert agreeableness or disagreeableness, the second those which assert the beauty of an object or the way of representing it; the former are judgments of sense (material aesthetic judgments), the latter (as formal) are alone proper judgments of taste" (*CPJ* 5:223). So, on the one hand, we find empirical aesthetic judgments, or those that "assert agreeableness or disagreeableness" while on the other hand we find pure aesthetic judgments which "assert the beauty of an object or the way of representing it." We find Kant's definition of the agreeable back in §3, where he writes that "**The agreeable is that which pleases the senses in sensation**" (*CPJ* 5:205). Importantly, the form of

[16] Or, conversely, a feeling of displeasure as the ground of an object's ugliness or disagreeableness.

sensation that grounds the agreeable is not form we encountered in earlier writings of Kant's. When describing the green of a meadow as agreeable, "The green color of the meadows belongs to **objective** sensation, as perception of an object of sense; but its agreeableness belongs to **subjective** sensation, through which no object is represented, i.e. to feeling, through which the object is considered as an object of satisfaction (which is not a cognition of it)" (*CPJ* 5:206). A subject determines pronounces the scene before them agreeable on the basis of a sensation. But the sensation that determines the agreeableness of the scene is not a representation of a thing through the senses. It is instead a "determination of the feeling of pleasure or displeasure" that is "related solely to the subject" (*CPJ* 5:205). As a *subjective sensation* of pleasure, we might say that it is an empirical feeling, or a pleasure that a subject feels upon being presented with a stimulus.

All of the elements above should combine to give us the following account of material subjective purposiveness. A judgment of agreeableness is grounded in or a result of a subjective sensation of pleasure. The fact that this judgment arises as the result of a feeling means that the former is the result of an inner principle. This is a species of purposiveness. It is a subjective, not an objective, species of purposiveness because the subjective sensation in question is *not* a concept. These judgments are grounded upon a non-conceptual feeling. Lastly, this feeling is not pure, but empirical. The subjective sensation that brings about our judgment of agreeableness stimulates us through the senses: "Of a dish that stimulates the taste through spices and other flavorings one may say without hesitation that it is agreeable" (*CPJ* 5:208). Because a judgment of agreeableness is grounded on this sort of subjective stimulation, it will not have a claim to a universal validity, but instead to a private one. When I say I find a dish agreeable, that does not give me a legitimate basis to demand that you find that dish agreeable, since my judgment is made on the basis of my own subjective (private) sensation of pleasure as a result of tasting the dish. Insofar as my taste of the

dish grounds my judgment of its agreeableness, that dish (or my way of representing it) is taken to exhibit a material subjective purposiveness.

3.1.2. Formal subjective purposiveness

Given what we know about purposiveness in general and material subjective purposiveness in particular, we can infer that *formal* subjective purposiveness is a causality that functions by positing a non-empirical and non-conceptual inner principle as its causal ground. Accordingly, what we find in the text of the third *Critique* is that formal subjective purposiveness is the variety of purposiveness we attribute to an object, or our way of judging the object, when we find the object beautiful. More precisely, if a *non-empirical* feeling of pleasure grounds our judgment that something is beautiful, the beauty of the object is established on the basis of a *formal* subjective purposiveness.

Judgments of beauty have their principle in the subject. Kant states that a judgment of taste generally "rests on subjective grounds, and its determining ground cannot be a concept" (*CPJ* 5:228). He then adds that when beauty is a "formal subjective purposiveness," and that when we judge something to be beautiful we are not deploying the concept of beauty as some standard of perfection against which we measure the beauty of a given object (ibid). Instead, an aesthetic judgment that predicates beauty brings our attention to the "purposive form in the determination of the powers of representation that are occupied with it" (ibid). The determining ground of such a judgment is "not a concept but the feeling (of inner sense) of that unison in the play of the powers of the mind, insofar as they can only be sensed" (ibid). Thus, what makes a judgment of beauty unique is that it tracks the feeling that arises when the faculties of imagination and understanding enter "formal subjective purposive" free play. A judgment of beauty comes about as a result of the feeling of pleasure that accompanies this free play.

This pleasure, to be sure, differs from the kind of pleasure we encounter in a material subjective purposiveness because it is not empirical. In the following passage – found in §12 of the *Critique of the Power of Judgment*, "The judgment of taste rests on *a priori* grounds" – Kant characterizes pleasure as a consciousness of the "merely formal purposiveness in the play of the cognitive powers of the subject".

> The consciousness of the merely formal purposiveness in the play of the cognitive powers of the subject in the case of a representation through which an object is given is the pleasure itself, because it [i.e., the pleasure] contains a determining ground of the activity of the subject with regard to the animation of its cognitive powers, thus an internal causality (which is purposive) with regard to cognition in general, but without being restricted to a particular cognition, hence it contains merely the form of the subjective purposiveness of a representation in an aesthetic judgment. (*CPJ* 5:222)

Pleasure is not an empirically felt sensation in this context. Moreover, this pleasure is taken to "contain a determining ground of the activity of the subject with regard to the animation of its cognitive powers", which betrays its role in an "internal", or purposive, causality. In the First Introduction, Kant distinguishes between a feeling of pleasure that "accompanies sensation" and another that accompanies reflection. Perhaps what makes this feeling non-empirical is that it is not attached to an empirical sensation in any way, but instead tracks the way in which faculties of the mind interact upon being presented with a certain object.

Indeed, some remarks Kant makes following the long quotation directly above confirm the notion that the feeling of pleasure unique to formal subjective purposiveness is tied to a certain disposition of the mind rather than an empirical representation. Kant specifies the role that pleasure has in this purposive causality when he adds that this pleasure makes "**maintaining** the state of the representation of the mind and the occupation of the cognitive powers without a further aim" possible (ibid). This pleasure grounds our propensity to "**linger** over the consideration of the beautiful" (ibid). In the case of a material subjective purposiveness, the sensation of pleasure is a

momentary, perhaps fleeting ground of the object's agreeableness or lack thereof. In contrast, the feeling of pleasure grounding judgments of beauty leads to a more sustained state, serving as a means of maintaining a particular state of mind and lingering on the object of our judgment. Perhaps this indicates that the pleasure involved here is not a mere stimulus response, but a certain disposition of the mind to coordinate its activity in a particular way. It is this disposition, in turn, that makes it possible for us to find, in some loose sense of the term, beauty in whatever object we behold.

Kant introduces this form of pleasure into the argumentation of the *Critique* because the subjective universality of judgments of beauty could neither be grounded on a mere empirical sensation nor a concept of the understanding. He writes, "What is strange and anomalous is only this: that it is not an empirical concept but rather a feeling of pleasure (consequently not a concept at all) which, through the judgment of taste, is nevertheless to be expected of everyone and connected with its representation, just as if it were a predicate associated with the cognition of the object" (*CPJ* 5:191). Of course, in the Deduction of Pure Judgments of Taste, Kant will tell us a story about how such judgments have a claim to a certain subjective universality, and that the subjective universality of these judgments is guaranteed by the presupposition that judgers universally possess the same faculties and our faculties ought to interact in the same way when we behold a beautiful thing. The merely formal pleasure grounding judgments of beauty "must necessarily rest on the same conditions in everyone, since they are subjective conditions of the possibility of a cognition in general, and the proportion of these cognitive faculties that is required for taste is also requisite for the common and healthy understanding that one may presuppose in everyone" (*CPJ* 5:292-3). And just as the feeling of pleasure that grounds judgments of beauty rests on conditions common to everyone, so too is the formal subjective purposiveness that

involves this pleasure "require[d]…of everyone else" (*CPJ* 5:293). Unlike a judgment of agreeableness, judgments of beauty are grounded on a feeling of pleasure that ought to be exhibited by everyone, and they therefore have a claim to a kind of intersubjective validity.

So, judgments of beauty are grounded in a very special, non-empirical kind of pleasure. This pleasure "accompanies the common apprehension of an object by the imagination, as a faculty of intuition, in relation to the understanding, a faculty of concepts, by means of a procedure of the power of judgment" and does so "merely for the sake of perceiving the suitability of the representation for the harmonious (subjectively purposive) occupation of both cognitive faculties in their freedom, i.e., to sense the representational state with pleasure" (*CPJ* 5:292). This pleasure, which does is not induced by a sensation of an object but merely tracks and allows us to maintain a certain free, harmonious relation between faculties of our mind, grounds our ascription of beauty to an object. Thus, we have another case of purposiveness in general because an inner principle, or the state of pleasure within the subject, is responsible for bringing about the judgment of beauty as its effect. The judgment could not arise without the judging subject feeling this non-empirical pleasure. However, it is a *subjective* kind of purposiveness because this feeling of pleasure which serves as inner principle is not a concept. And this subjective purposiveness is formal insofar as that feeling is not tied to an empirical representation, but to a state of the mind.[17]

[17] Even though it is based on a subjective feeling, certain judgments of taste still have a claim to a "subjective universality." This is possible because, according to Kant, the feeling of pleasure that grounds our assessment of an object's beauty appeals to a universal presupposition. Judgments of beauty possess the following two "peculiarities", according to Kant. One, "The judgment of taste determines its object with regard to satisfaction (as beauty) with a claim to the assent of **everyone**, as if it were objective" (*CPJ* 5:281); and two, "The judgment of taste is not determinable by grounds of proof at all, just as if it were merely **subjective"** (*CPJ* 5:284).

On the one hand, as the first peculiarity indicates, a judgment of beauty appears to be "objective", demanding the assent of everyone. However, the "objectivity" of a judgment of beauty must be unique, for this sort of judgment "is not grounded on concepts at all, and is above all not a cognition" (*CPJ* 5:282). Instead, such a judgment appeals to everyone's autonomy to back its claim to a non-objective universality, encouraging appreciation of aesthetic exemplars or models. Though everyone's taste is inviolably autonomous, beauty is not merely subjective or relative. Individuals should look to aesthetic exemplars not to mindlessly imitate them, but to learn what constitutes beauty and what does not from their predecessors (*CPJ* 5:283). The first peculiarity teaches us that, though every individual is

capable of being their own judge of what is beautiful and what is not, there are still subject-transcendent standards for what constitutes a beautiful work of art.

Nonetheless, judgments of taste are "subjective", based on our feeling of pleasure. The subjectivity of such judgments reinforces the notion that beauty is one person's judgment is normatively binding in a way that doesn't force itself upon another judge: "there is no empirical **ground of proof** for forcing the judgment of anyone" (*CPJ* 5:284). Indeed, the subject's own feelings are essential to a judgment of taste: "I try the dish with **my** tongue and my palate, and on that basis (not on the basis of general principles) do I make my judgment" (*CPJ* 5:285). The judgment of beauty is dependent upon the individual's subjectivity and intersubjectively binding, but not in a way that compels us like an empirical proof does. The two peculiarities help us refine the main question of the deduction to a greater degree: How are subjective but universally binding judgments possible at all?

The goal of Kant's deduction of pure aesthetic judgments is to demonstrate how judgments that paradoxically possess these two peculiarities are possible. Stated concisely, subjectively universal judgments of taste are possible if everyone possesses the same faculties and that those faculties operate in the same way. As long as we are "justified in presupposing universally in every human being the same subjective conditions of the power of judgment that we find in ourselves" we can be sure that this form of judging is possible (*CPJ* 5:290).

Kant affirms the presupposition that everyone possesses the same faculties interacting in the same way by observing that a subjective feeling of pleasure accompanies the interaction our faculties undergo when making a judgment of beauty, and this feeling is universally communicable: "In all human beings, the subjective conditions of this faculty, as far as the relation of the cognitive powers therein set into action to a cognition in general is concerned, are the same, which must be true, since otherwise human beings could not communicate their representations and even cognition itself" (*CPJ* 5:290n). If human beings did not possess the same faculties that interacted in the same ways, they would not be able to communicate their representations to each other. But we can communicate our representations and cognitions. Therefore, all of us possess the proper "subjective conditions" for having pure judgments of taste – i.e., we can feel the *a priori* pleasure induced by the free play of the imagination and understanding.

More forcefully, Kant asserts that the kind of pleasure in question, which is neither the empirical pleasure of enjoyment nor the pleasure involved with contemplating an idea of reason, *must* rely on the same conditions for everyone: "This pleasure must necessarily rest on the same conditions in everyone, since they are subjective conditions of the possibility of a cognition in general, and the proportion of these cognitive faculties that is required for taste is also requisite for the common and healthy understanding that one may presuppose in everyone" (*CPJ* 5:292-3). A judgment of beauty requires the faculties of the imagination and the understanding to interact in a harmonious free play. If judgments of taste were not possible, that would signify a widespread lack of a healthy, fully functioning faculty of understanding and faculty of the imagination across judgers. Yet the very fact that judgers reliably form empirical cognitions indicates that human beings typically do possess these faculties in equal proportion. Thus, we can conclude that judgments of taste requiring these faculties are possible. Secure in our knowledge that the imagination and understanding exist and behave in the same way for every human, "one who judges with taste…may also require the subjective purposiveness, i.e., his satisfaction in the object, of everyone else, and may assume his feeling to be universally communicable, even without the mediation of concepts" (*CPJ* 5:293).

The subjective universality of judgments of taste requires us to step into others' shoes and imagine how they would respond to a work of art. Such a reflective capacity might correspond to the feeling Kant calls the "sensus comunis":

> By "*sensus* ***communis***," however, must be understood the idea of a **communal** sense, i.e., a faculty for judging that in its reflection takes account (*a priori*) of everyone else's way of representing in thought, in order **as it were** to hold its judgment up to human reason as a whole and thereby avoid the illusion which, from subjective private conditions that could easily be held to be objective, would have a detrimental influence on the judgment. Now this happens by one holding his judgment up not so much to the actual as to the merely possible judgments of others, and putting himself into the position of everyone else, merely by abstracting from the limitations that contingently attach to our own judging; which is accomplished by leaving out as far as is possible everything in one's representational state that is matter, i.e., sensation, and attending solely to the formal peculiarities of his representation or his representational state. (*CPJ* 5:293-4)

Judgments of beauty are possible because we can affirm that all human beings possess the same faculties in equal measure and that these faculties interact in similar ways in response to similar objects. If we are all equipped with the same faculties operating in the same way, we must be able to tap into our fellow human's mode of representing and form expectations about how they shall or should judge what is before them. To be sure, occupying such a standpoint requires some degree of abstraction – two individuals cannot have *identical* representations of the same thing. Still, I can put myself into the position of everyone else; the *sensus communis* just is the feeling that accompanies this

3.2. Objective purposiveness

So far, we have discussed subjective forms of purposiveness and, in the process, seen glimpses of Kant's doctrine of objective purposiveness. My interpretation of objective purposiveness states that it is a kind of causality according to which a concept serves as the relevant inner principle grounding the reality of its object. Kant provides definitions of objective purposiveness at various points throughout the *Critique of the Power of Judgment*. Here are just a few:

> In general, therefore, the concept of perfection as objective purposiveness has nothing at all to do with the feeling of pleasure, and the latter has nothing to do with the former. A **concept** of the object necessarily belongs to the judging of the former, while such a concept is not necessary at all for the judging of the latter, which can be created by merely empirical intuition. By contrast, the representation of a subjective purposiveness of an object is even identical with the feeling of pleasure…, and between the latter and the former there is a very great gap. (*CPJ* 20:228-9)

> **Objective** purposiveness can be cognized only by means of the relation of the manifold to a determinate end, thus only through a concept…[It] is either external, i.e., the **utility** of the object, or internal, i.e., its **perfection**. (*CPJ* 5:226)

> To judge objective purposiveness we always require the concept of an end, and [if that purposiveness is not to be an external one (utility), but an internal one], we require the concept of an internal end, which contains the ground of the internal possibility of the object. (*CPJ* 5:227)

The first of these passages emphasizes that objective purposiveness has "nothing at all to do with

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reflective stance. Capable of such fellow-feeling, I can ensure that my subjective judgments of taste are not merely private, for I can expect that someone who is roughly in my position should have roughly the same reaction.

While Paul Guyer (1979) takes Kant's discussion of common sense to be an unnecessary detour, I follow Samantha Matherne (2019) in believing that this common sense plays an important role in Kant's deduction of pure judgments of taste. As a feeling that tracks my ability to reflect upon the standpoint of others when beholding, say, an artwork, common ostensibly allows me to figure out whether or not my aesthetic judgment about that artwork should be binding on others.

So, Kant defends the idea that judgments of beauty are subjectively universal by affirming that all judgers are equipped with the same faculties interacting in the same way. Because we can expect that everyone has the same faculties operating in roughly the same way, we can have access to a *sensus communis* – that is, we can occupy a reflective standpoint from which we can form expectations about how other subjects would react to the object of our judgment. Thus, judgments of beauty are conditioned by a purposiveness without concepts, but still have a claim to universality by virtue of the intersubjective presuppositions specified in the Deduction.

the feeling of pleasure" but instead involves a "**concept** of the object." On my interpretation, this is Kant's way of saying that the feeling of pleasure is *never* a causal ground in cases of objective purposiveness. Rather, a concept serves as the relevant inner principle in objectively purposive causal interactions. In some instances, as we will see below, the relevant concept is that of a thing's utility – this will correspond to the relative material objective variety of purposiveness – or a thing's perfection – this will correspond to the inner material objective variety of purposiveness. In the former case, when we attribute the concept of utility to a thing as a means of explaining its purposive activity, we are judging that the thing's reality is grounded in the ends of another purposive agent. For example, when I judge that a tree is good for building myself a cabin, I explain the reality of the tree (its existence) as useful for my end of shelter from the environment. In the latter case, when we attribute the concept of perfection to an object, we are explaining the object as possessing ends that are good for its own sake and stating that its activity, structure, and so forth are the way that they are for the sake of those intrinsically valuable ends. For example, when explaining the behavior of an animal, we can think of its self-preservation as a kind of perfection. Thus, when the animal lives alongside others of its species in a pack or a herd, we explain such activity as a result of the animal's striving for self-preservation: It exists in a herd because and for the sake of its own drive to self-preserve. We shall see that there is another strange, perhaps contradictory form of purposiveness Kant also mentions – formal objective purposiveness – but only after we have thoroughly surveyed these two significant forms of material objective purposiveness.

3.2.1. Material objective purposiveness

In general, objective purposiveness is that causality according to which a concept grounds the reality of its object. One division of objective purposiveness is real objective purposiveness. Kant

states, "Experience leads our power of judgment to the concept of an objective and material purposiveness, i.e., to the concept of an end of nature, only if there is a relation of the cause to the effect to be judged which we can understand as lawful only insofar as we find ourselves capable of subsuming the idea of the effect under the causality of its cause as the underlying condition of the possibility of the former" (*CPJ* 5:366-7). This passage contains a few remarkable suggestions. For one, Kant states that our "experience" leads our power of judgment to the concept of material objective purposiveness. That is, there is something about the way real, existing objects present themselves to us that suggests the presence of such a purposiveness. What it is about objects that suggests this form of purposiveness could be illustrated by an example Kant uses just a few paragraphs earlier:

> For if one adduces, e.g., the structure of a bird, the hollowness of its bones, the placement of its wings for movement and its tail for steering, etc., one says that given the mere *nexus effectivus* in nature, without the help of a special kind of causality, namely that of ends (*nexus finalis*), this is all in the highest degree contingent: i.e., that nature, considered as mere mechanism, could have formed itself in a thousand different ways without hitting precisely upon the unity in accordance with such a rule, and that it is therefore only outside the concept of nature, not within it, that one could have even the least ground *a priori* for hoping to find such a rule. (*CPJ* 5:360)

In this example, being presented with and subsequently contemplating the structure of a bird leads Kant to appeal to a "special kind of causality," that is, purposiveness. A purposive causality not only helps Kant (and us) explain why birds have the particular structure that they do, but is necessary for such an endeavor. Without appealing to the bird's ends, we could not explain why its bones are hollow and why it's feathered. There is something about merely beholding objects of nature that indicates the presence of, and perhaps compels us to assert, this species of purposiveness.

Another remarkable feature of the passage above is what it identifies as the "real" in "real objective" purposiveness. Part of what seems to make this species of purposiveness real is that the

ends we appeal to in order to explain it are ends "of nature". When Kant claims that the ends of objective material purposive activity are ends of nature, we should read him as saying that these ends are built into the nature of whatever object they are explaining. The "real" in "material objective purposiveness" thus tells us two things: one, that we are attributing purposiveness to a real, existing object; two, that the ends of this object are a fixture of its nature. In the case of real *relative* objective purposiveness, it turns out that some ends of existing objects serve the purposiveness of other purposive agents. It is the nature of a mahogany tree that its buoyant, pliable wood could be used to build a ship, and thus that the mahogany tree exists for the sake of shipbuilding. But Kant insists that such an explanation would not give us an account of the true or ultimate purpose of a mahogany tree. After all, the tree is an organism, and as such it exhibits a real *inner* objective purposiveness. In other words, it has ends of reproduction, growth, and self-maintenance that exclusively serve its own purposiveness and not that of some other agent.

3.2.1.1. Material relative objective purposiveness

Objective real relative purposiveness is a kind of causality according to which the concept of an end grounds the realization of that end. But the end in question in this subspecies of purposiveness has certain definitive features. Because it is a species of real objective purposiveness, the end here is built into the nature of a real natural object presented to us in experience. Crucially, this end is one that serves the purposiveness of some agent other than the object we are explaining. Real purposiveness is *relative* "if we regard [its effect] only as material for the art of other possible natural beings, thus if we regard it…as a means for the purposive use of other causes" (*CPJ* 5:367). Kant provides further elaboration and gives us a useful example when he writes,

> the objective purposiveness which is grounded on advantageousness is not an objective purposiveness of the things in themselves, as if the sand itself, as an effect of its cause, the

> seam could not be comprehended without ascribing a purpose to the latter and without considering the effect, namely the sand, as a work of art. It is a merely relative purposiveness, contingent in the thing itself to which it is ascribed; and although in the examples we have given the species of grasses themselves are to be judged as organized products of nature, hence as rich in art, nevertheless in relation to the animals which they nourish they are to be regarded as raw materials. (*CPJ* 5:368)

We shall see that grass, considered as a living thing, has ends of its own. But it is also possible to attribute ends to grass such as the nourishment of cattle. When we explain that grass exists for the sake of nourishing cattle, we regard it useful for the purposiveness of other entities.

In the case of relative purposiveness, Kant emphasizes that the end is in a thing only contingently. The end of nourishing cattle is in grass contingently in the sense that, without the cattle's end of nourishment, the grass's end of nourishing would not exist. The grass's relatively purposive end of serving cattle is therefore only present in the grass if there exist cattle that graze on that grass. Without cattle, in other words, there would be no use for grass as a source of nourishment.

Importantly, Kant believes it a sign of hubris to think that the ultimate purposes of natural products (and nature itself) are only useful for the purposiveness of other beings. He states, "to say that moisture falls from the air in the form of snow, that the sea has its currents which float the wood that has grown in warmer lands there, and that great sea animals filled with oil exist **because** the cause that produces all these natural products is grounded in the idea of an advantage for certain miserable creatures would be a very bold and arbitrary judgment" (*CPJ* 5:369). This is not to deny that nature and its products serve human beings and our purposive agency. It is undeniable that trees serve the purpose of building sturdy shelter, that vegetation serves the purpose of nourishing us, and that sea currents serve the purpose of facilitating transcontinental commerce. Yet, when we study nature, we should find that its products seem to act in accordance with purposes that serve

their own purposiveness, and this would suggest that nature is not made to serve human convenience. Nature and its products have their own purposes.

3.2.1.2. Material inner objective purposiveness

Besides the species of material objective purposiveness considered in the previous section, there is another. In some cases, the effect produced by a natural thing can also be regarded "immediately as a product of art" (*CPJ* 5:367). By considering a thing capable of acting artfully, as it were, we attribute to it a special kind of material objective purposiveness: i.e., a purposiveness *internal* to the thing judged. The ends attributed to an entity on the basis of its internal purposiveness are not useful for the sake of some other purposive agent, but are conducive to (and explain) the existence of the thing itself. When we attribute such a real inner objective purposiveness to an object, we are judging it to be what Kant calls a "natural end." Thus, we should say that when a thing is judged to be a "natural end," it is the kind of entity to which we assign a real or material internal objective purposiveness.

To be considered a natural end, a thing must possess a purposiveness that takes (loosely) a representation of itself as a whole as its internal principle and uses this representation to organize its parts. Kant expresses in two steps. "Now for a thing to qualify as a natural end it is requisite, **first**, that its parts (as far as their existence and their form are concerned) are possible only through their relation to the whole. For the thing itself is an end, and is thus comprehended under a concept or an idea that must determine *a priori* everything that is to be contained in it" (*CPJ* 5:373). That is, the parts of a natural end do not happen to be organized by virtue of some accident. Nor is the thing's particular organization an expression of the mechanism of nature. As Kant suggested in an earlier example, why the structure of a bird takes the shape it does and not some other is a fact that can only be explained by appealing to its ends (e.g., "A bird's bones are hollow for the sake of

allowing it to fly"). The idea Kant expresses here is related, but slightly more specific: The parts of a bird – the placement of its wings, its weight and wingspan, the color of its feathers, and so forth – are "possible only through their relation to the whole." That is, we might think, there is a concept or an idea of how a bird ought to be organized, and its parts organize themselves in accordance with this concept or idea.

However, Kant follows this point up by adding that if we stop here, a thing is merely "the product of a rational cause distinct from the matter." Thus, the second step of his explanation of a natural end adds that "if a thing, as a natural product, is nevertheless to contain in itself and its internal possibility a relation to ends, i.e., is to be possible only as a natural end and without the causality of the concepts of a rational being outside of it, then it is required, **second**, that its parts be combined into a whole by being reciprocally the cause and effect of their form" (*CPJ* 5:373). The parts of a natural end reciprocally produce each other. A heart, we might say, pumps blood into other vital organs, such as the lungs. The lungs allow a creature to breathe, oxygenate its blood, and dispense with the carbon dioxide in its blood, contributing both to the heart's circulatory efforts and the function of other vital organs. Each part of the body works in symphony with the other to organize and sustain the thing containing these parts. The organization of this plan is carried out in accordance with a "concept" of how the whole is supposed to function – a "concept" that is presumably built into the thing by nature:

> For a body, therefore, which is to be judged as a natural end in itself and in accordance with its internal possibility, it is required that its parts reciprocally produce each other, as far as both their form and their combination is concerned, and thus produce a whole out of their own causality, the concept of which, conversely, is in turn the cause (in a being that would possess the causality according to concepts appropriate for such a product) of it in accordance with a principle; consequently the connection of **efficient causes** could at the same time be judged as an **effect through final causes**. (*CPJ* 5:373)

In this passage, we see Kant affirm that the parts of a "body" judged as a natural end "reciprocally produce each other" in such a way that leads them to "produce a whole out of their own causality." The kind of causality responsible for organizing their parts is a purposive one. The principle or cause of this organizing causality is the "concept" of the very whole produced out of this causality.[18] Thus, a body judged as a natural end organizes its parts in accordance with a concept of its whole, and its organized concatenation of parts is consequently an effect brought about through final causes – that is, an effect brought about not by some physical push or pull, but by means of the *representation* of the effect.

A thing that possesses a material internal objective purposiveness, or a natural end, has a special kind of power, one that allows it to organize itself in accordance with a coherent plan. As Kant puts it, "An organized being is thus not a mere machine, for that only has a **motive** power, while the organized being in itself possesses a **formative** power, and indeed one that it communicates to the matter, which does not have it (indeed it organizes the latter): thus it has a self-propagating formative power, which cannot be explained through the capacity for movement alone (that is, mechanism)" (*CPJ* 5:374). This formative power is none other than the purposiveness internal to the organized being.[19] On the basis of this purposiveness, a being takes a representation of its "**inner natural perfection**" (*CPJ* 5:375) as the principle for organizing its "matter". To be sure, we cannot know the details of the innerworkings of this purposive power in every case; how natural things come to possess and deploy their standard of inner natural

[18] Kant's parenthetical qualification indicates to me that this is his account of how a natural end comes to be organized when the thing in question possesses the ability to form and deploy concepts. However, while we explain the thing as organized in accordance with a concept, it may be possible that the particular organism in question does not possess or deploy concepts at all. As far as we know, the purposive causality proper to a human being uses concepts as principles in many instances. As Kant adds later in this same section of the text, "the organization of nature is…not analogous to any causality that we know" (*CPJ* 5:375).

[19] In Chapter 3, we shall see that the capacity of an organized being to act on the basis of this internal purposiveness just is its *life*.

perfection is a process that is "not thinkable and explicable in accordance with any analogy to any physical, i.e., natural capacity that is known to us" (*CPJ* 5:375). As such, our judgment that a thing is a natural end cannot count as an instance of us deploying a constitutive concept of the understanding or reason, only providing us with a "regulative concept for the reflecting power of judgment, for guiding research into objects of this kind" (*CPJ* 5:375). Still, observing beings that possess this kind of purposive causality leads us to the conclusion that there are non-mechanistic forces governing the organization of nature. The very notion of a natural end thus "leads reason into an order of things entirely different from that of a mere mechanism of nature, which will here no longer satisfy us" (*CPJ* 5:377). The judgment that a thing has a material internal objective purposiveness is special because it leads us to attribute a purposive causality to natural products and to nature. Trees, oceans, ducks, and other human beings, from this perspective, are not mere automata, but are things that unfold as they actively realize their ends.

3.2.2. Formal objective purposiveness

Formal objective purposiveness is perhaps the strangest species of objective purposiveness. Kant officially introduces it in §62 of the *Critique of the Power of Judgment* by means of examples from geometry. "All geometric figures", he opens the section, "that are drawn in accordance with a principle display a manifold and often admired objective purposiveness, namely that of serviceability for the solution of many problems in accordance with a single principle, and indeed each of them in infinitely many different ways" (*CPJ* 5:362). By studying the figure of a parabola, for instance, we may be able to solve problems in physics regarding the trajectory of a moving body when traveling at a particular speed. But, Kant adds, "the purposiveness still does not make the concept of the object itself possible" (ibid). That is, though it is useful for the sake of solving problems in physics, we should not infer that the parabola was invented for the sake of solving this

problem. We could also infer that, while material objective purposiveness has to do with making judgments about the ends internal to natural objects that we can behold in experience, formal objective purposiveness will not be about natural things or say anything at all about the nature of the thing we are explaining. Indeed, formal objective purposiveness is about merely represented entities and their manifold uses, which are not built into those entities' natures.

Though Kant's preferred example of a geometric figure may not initially seem illuminating, it reinforces his general characterization of objective purposiveness as that species of purposiveness that has a concept as its ground. Formal objective purposiveness invokes a concept of a unified principle as its ground.

> The figure of a circle is an intuition that can be determined by the understanding in accordance with a principle; the unity of this principle, which I assume arbitrarily and, **as a concept**, make into a ground, when applied to a form of intuition (to space) which is to be found in me merely as representations and indeed *a priori*, makes comprehensible the unity of many rules resulting from the construction of that concept, which are purposive in many respects, without an *end* or any other ground having to be the basis of its purposiveness. (*CPJ* 5:364, emphasis in bold added)

Importantly, the concept of a circle is not what grounds the manifold purposive uses of that figure, which is more accurately portrayed as an image produced in intuition. It is rather the "unity of [a] principle" taken as a concept and make into ground that is "applied to a form of intuition" and allows us to apprehend many rules that seem to emanate from the figure. While it is unclear what exactly the concept in question is and how it unifies the various rules and solutions resulting from our judging the figure to be purposive, Kant is often at pains to emphasize the mental nature of this species of purposiveness: "I **introduce** the **purposiveness** into the figure that I draw **in accord with a concept**, i.e., into my own way of representing that which is given to me externally" (*CPJ* 5:365). Even though Kant's emphasis on the intellectual nature of this species of purposiveness may lead us to wonder why this is not categorized as a special kind of subjective purposiveness,

he insists that this is an objective purposiveness because it involves a *concept* as its ground. This species is "not a judging without a concept, which makes noticeable a merely **subjective** purposiveness in the free paly of our cognitive faculties, but an intellectual judging in accordance with concepts, which gives us distinct cognition of an objective purposiveness, i.e., serviceability for all sorts of (infinitely manifold) purposes (*CPJ* 5:366). More work needs to be done to show why exactly this purposiveness is *objective* given how dependent upon mental processes and representations it seems to be.[20] For our purposes, it suffices to say that because it involves judging a geometric object to be purposive in accordance with a concept, this is indeed a species of objective purposiveness.

4. Is purposiveness just a "lawfulness of the contingent"?

So far, I have been presenting a case for interpreting purposiveness as a kind of causality that is driven by inner principles. Broadly construed, these principles include, but are not limited to, feelings of pleasure, representations of ends, and so forth. Some commentators who are sympathetic to the unity of purposiveness in the book have emphasized that such unity is achieved only if we recognize purposiveness as a "lawfulness of the contingent" (cf. Ginsborg 2015 and Zuckert 2007). Ginsborg emphasizes passages in which Kant portrays purposiveness this way to interpret purposiveness as a "normative lawfulness" whereas Zuckert takes these passages to mean that Kant wants purposiveness to account for the "unity of the diverse" (2007, 5).

[20] And besides the question of what exactly makes this form of purposiveness objective, a perspicuous reader might worry that Kant has set a trap for himself in these later sections of the work, as earlier, in the *Critique of the Aesthetic Power of Judgment*, he flatly states that a "formal **objective** purposiveness without an end…is a veritable contradiction" (*CPJ* 5:228).

When closely examining the passages these commentators cite, we notice a conspicuous theme, one that presents a major impediment to those readers who take Kant's characterization of purposiveness as a lawfulness of the contingent to define the concept of purposiveness in general.

> For purposiveness is a lawfulness of the contingent as such. […]with regard to its products as systems, e.g., crystal formations, various shapes of flowers, or the inner structure of plants and animals, it proceeds **technically**, i.e., as at the same time an **art.** (*CPJ* 20:217)
>
> [A perfection is grounded in the concept of something as an end, and this end] "concerns merely the possibility of things and **the lawfulness of an intrinsically contingent combination of the manifold** in the object. […] The same kind of objective purposiveness observed in things in nature (especially in organized beings) is now thought as objective and material and necessarily carries with it the concept of an end of nature (either real or imputed to it), in relation to which we also attribute the perfection of things." (*CPJ* 20:228)
>
> …since the lawful unity in a combination we cognize as in accordance with a necessary aim (a need) of the understanding but yet at the same time as contingent in itself is represented as a purposiveness of the objects (in this case, of nature)…" (*CPJ* 5:184)
>
> [Reason] "requires unity, hence lawfulness" when connecting particular, contingent laws of nature," and the "lawfulness of the contingent is called purposive" (*CPJ* 5:404).

An interpretive issue centering Kant's definition of purposiveness as a "lawfulness of the contingent" is that Kant specifically defines purposiveness this way when discussing *objective* purposiveness. In the first passage, purposiveness is a lawfulness of the contingent when judging the technique of nature, or how it "proceeds at the same time as **art**". In Kant's parlance, we might think of this as the result of making a teleological judgment about the inner material purposiveness of nature. Likewise, in the second passage, an *end* is characterized as that which "concerns…**the lawfulness of an intrinsically contingent combination of the manifold** in the object" when it is deployed in a judgment that ascribes an objective and material purposiveness to things in nature. As we saw above, ends or purposes are sometimes, but not always, involved in purposiveness – there is purposiveness without purpose. And the last two passages cited above characterize purposiveness as a lawfulness of the contingent with respect to judgments about the purposiveness

of natural things. Furthermore, the last passage is contained in an *Anmerkung* to a section in which Kant the concept of the *objective* purposiveness of nature as a "principle of reason" for the reflecting power of judgment. In short, in all of the cases cited by commentators who center purposiveness as a lawfulness of the contingent, Kant seems to be characterizing objective purposiveness insofar as it applies to natural objects.

This should lead us to conclude that purposiveness may be glossed as the lawfulness of the contingent in the case of either objective purposiveness in general or material, internal objective purposiveness in particular. Because objective purposiveness also comes in a formal variety that need not involve a concept of an end (*CPJ* 5:364) and Kant seems to associate the lawfulness of such purposiveness with the concept of an end (cf. the passage from *CPJ* 20:218 cited above), we should conclude that Kant has teleological judgments that assign a material, internal purposiveness to nature in mind when he defines purposiveness as a lawfulness of the contingent. Indeed, in the passages above, Kant refers to the "inner structure" of objects of nature when attributing to them a contingent lawfulness, though he does not rule out the possibility that judgments attributing a relative or outer material purposiveness to nature may give the contingent a certain lawfulness, too. Regardless of whether there is a case to apply this gloss on purposiveness to teleological judgments that assign a material outer or relative purposiveness to objects in nature, one thing is certain: this gloss on purposiveness should not be taken as a definition of objective purposiveness in general, nor should it be considered Kant's definitive characterization of purposiveness *tout court*.

Instead, we should consider purposiveness as a "lawfulness of the contingent" to be illustrating an important point. Objective purposiveness fundamentally involves concepts, representations that are themselves lawful in the sense that they pick out marks which apply to and

are definitive of objects in general. For example, the concept of a <body> could be considered "lawful" in the sense that it allows us to think and pick out bodies in general, regardless of how the many differences between particular bodies. When attributing an objective purposiveness to a thing, we are comparing a thing as it currently is to a concept of what it is supposed to be, thereby arriving at a determination of its perfection or lack thereof. As such, judgements that ascribe an objective purposiveness of nature takes the particular, accidental object that we behold in experience – an "intrinsically contingent combination of the manifold in the object", as Kant puts it – and compares it to a concept of what it ought to be. The concept of what it ought to be is presumably represents a general standard that the diverse, contingent array of objects presented to us in nature must meet. For instance, our representation of the "perfect" human body may describe it as an object that needs a heart to pump blood through its circulatory system. To judge that a particular human body has a functioning heart is to say that this body, itself a "contingent combination of the manifold", conforms to the concept of a perfect human body. As such, this particular human body with which I've been presented counts as an instance of this concept, even if it has a shape, size, color, and so on that is unlike any body that's come before it or any body that will succeed it. My judgment has in effect given a lawfulness to this contingent human body, demonstrating that it can and does conform to the standard of its perfection prescribed by its concept.

5. Conclusion

In this chapter, I have shown that purposiveness is a causality driven by inner principles. What this means is that the ground of purposive causality is something *within* the acting substance, not outside of it. A paradigm example of this is a representation that grounds the reality of the

object of that representation, as is the case when a shipbuilder builds a ship in accordance with previously unrealized representation of the ship. However, purposiveness the inner principles of purposiveness are not exhausted by representations, as our analysis of the species of purposiveness show us that *feelings* can also act as purposive grounds. What counts as an inner principle varies depending on the kind of purposiveness we are interrogating, and the kind of purposiveness we are interrogating is determined by the kind of object we set out to explain.

In the next chapter, I focus my efforts on a deeper analysis of just one particular kind of purposiveness – namely, what Kant calls objective, real, inner purposiveness, which we attribute to an organisms. Doing so will put us on even better ground for mounting and responding to the question of whether organisms exist. It will also give us a richer sense of what the inner principles driving purposiveness causality are and could be.

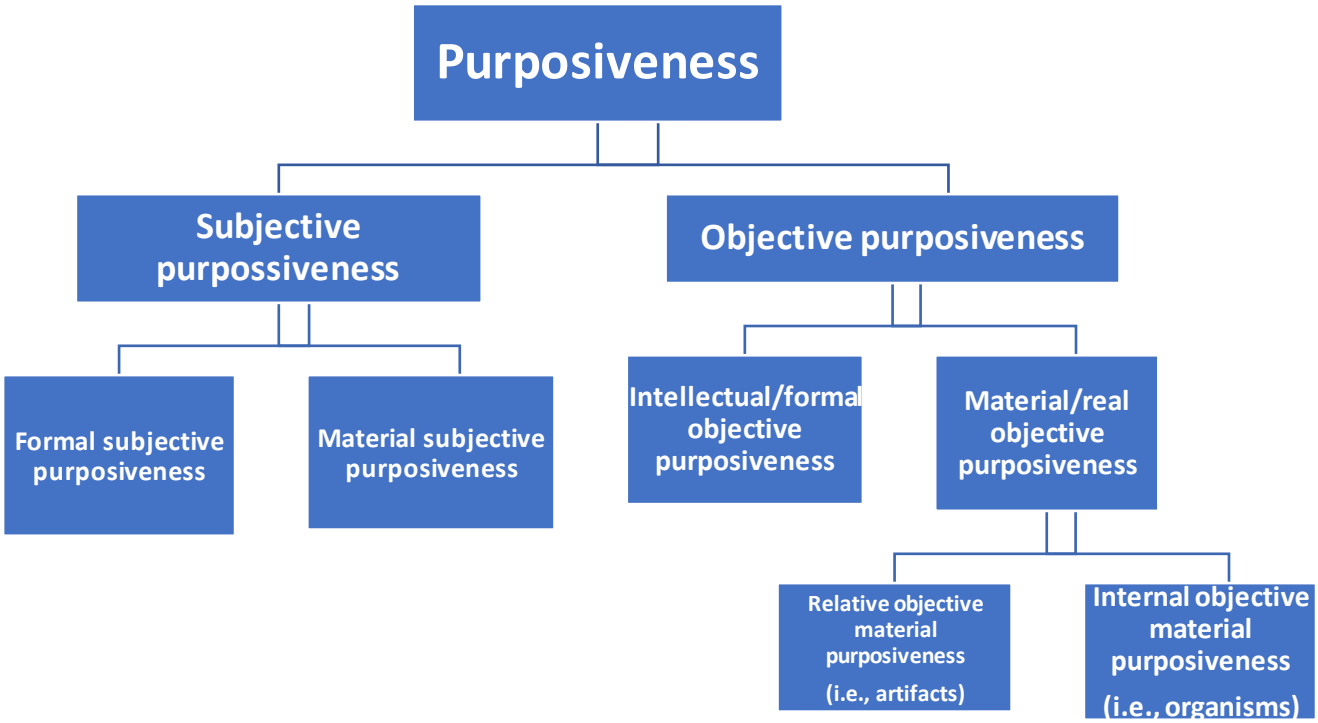

Figure 1. The table of purposiveness

Chapter 2. What is the organism?

The goal of this chapter is to analyze the concepts of nature, organism, and machine, arriving at distinct, but interrelated, characterizations of the terms. For Kant, an organism is a thing that possesses a real, objective, inner purposiveness. That is, an organism is a thing that has the causal activity to act in accordance with inner principles (somehow) built into it. The inner principles driving the organism's purposive activity are "ends" [*Zwecke*]. Organisms are fundamentally distinct from machines, which merely act in accordance with external principles that are subject to the laws of mechanics. While we may think that Kant's canonical characterizations of nature excludes the possibility that we can conceive of organisms existing in nature, I show that this is not the case. That is, it is not inconceivable that there are organisms in nature, to Kant.

The chapter proceeds as follows. I open section 1 with a discussion of the concept of nature, explaining why the very concept of nature does not exclude the possibility of organisms. In section 2, I dissect the contrast term for organism – namely, machines. Machines are mere matter in motion, and their motion is both propelled and brought to a halt by external principles governed by the laws of physics. In section 3, I argue that organisms are something more than matter in motion. In contrast to machines, organisms can act in accordance with *internal* principles. These principles are ostensibly not subject to the laws of mechanics, insofar as they are not a property of matter.

1. Kant on nature

Before commencing with our definitions of the machine and the organism, we should put forward a working characterization of Kant's concept of nature. Nature contains a manner of objects operating in accordance with deterministic, even mechanistic causes, so does Kant's concept of nature foreclose the very possibility of non-mechanistic organisms? Let us examine Kant's concept of nature more closely to find out.

In the Introduction to the Antinomies of Pure Reason in the *Critique of Pure Reason*, Kant distinguishes between world and nature. World signifies "the mathematical whole of appearances and the totality of their synthesis in the great as well as in the small, i.e., in their progress through composition as well as through division" (A418/B446). He continues, a world is defined as "nature insofar as it is considered as a dynamic whole and one does not look at the aggregation in space or time so as to bring about a quantity, but looks instead at the unity in the **existence** of appearances" (A418-9/B446-7). Kant follows this up by contrasting freedom as an unconditioned causality of a cause with a "natural cause", which is just a previously conditioned cause (A419/B447). In these passages, nature is a species of world that is "dynamic" – perhaps meaning that nature and its objects are judged in accordance with the "dynamical," not "mathematical" concepts of the understanding, which would suggest that nature describes a synthesized manifold of appearances taken to exist (see A160/B199; B201). The use of "dynamic" to describe the whole of nature could also have natural scientific connotations, making nature out to be a whole that is in motion. Either way, nature is defined in relation to how we "look" at it – we "look" at nature not as a mere aggregate of objects, but as a unity of existing appearances. Presumably, the existence of these appearances is to be explained by a series of natural causes.

Earlier, in the A edition of the Transcendental Deduction, Kant defines nature as "nothing in itself but the sum of all appearances, hence not a thing in itself but merely a multitude of representations of the mind," and the unity of these representations is brought about by our "faculty of cognition" (A114). Kant strikes a similar note when he says that "we ourselves bring into the appearances that order and regularity in them we call **nature**," and the unity of nature follows from the conditions for the possibility of our empirical cognition of objects (A125). That is, because it is necessary that we experience objects by subsuming given particulars under the universal and necessary concepts of the understanding, nature, insofar as it consists of the objects we experience, is not a mere, scattered aggregate of appearances, but a representation of appearances as subsisting in a unified whole. In these passages, the unity of experience seems to serve as a sufficient condition for the unity of nature.

Kant concludes the Analogies of Experience with a similar definition of nature, saying that "By nature (in the empirical sense) we understand the combination of appearances as regards their existence, in accordance with necessary rules, i.e., in accordance with laws" (A216/B263). The Analogies are supposed to leave us with the conclusion that "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 objects in it, would be possible" (ibid). In other words, the unity of nature is a necessary condition for the unity of experience as a sum total of appearances – if we negate the former, then we negate the latter. As long as our experiences are unified by the concepts of the understanding, so too are the appearances constituting nature.

If we experience objects – that is, are presented with them in intuition and subsume those intuitions under concepts of the understanding – then these objects "lie in one nature." The concept of causality discussed in the first *Critique* does not have ends or purposes as causal grounds, so if

we take organisms to be things that have ends as causal grounds, we cannot experience, or empirically cognize, the organism. But notice that empirically cognizing objects is merely sufficient for placing objects in one nature, not necessary for doing so. Thus, it is possible that there could be natural objects the causality characteristic of which we do not experience or empirically cognize. There could be objects of nature that are produced by means of supersensible grounds, for instance. While we could never experience the causality characteristic of these objects, they can still be a part of nature.

Kant's lecture transcripts seem to support the idea that there could be non-empirically-cognizable causes precipitating events in nature. For instance, in the *Metaphysik L₂* Kant writes, "Everything that happens in nature, happens either according to physical-mechanical laws or according to laws of the power of free choice. In inanimate nature everything happens according to mechanical laws, but in animate according to laws of the power of free choice" (*LM* 28:257). That there is an *animate* nature suggests that not every object in nature is a dead piece of matter subject to all and only the laws of mechanism. In the *Metaphysik Mrongovius*, Kant distinguishes between a broad sense (*sensu toto*) and a strict sense (*proprio*) of nature, stating that only the latter refers to "the summation of all objects of the senses" (*LM* 29:773). That he would endorse such a distinction and associate his definition of nature as a sum of appearances with the "strict" sense suggests that there could be more to nature than that which appears to and is therefore empirically cognized by us. In the Cosmology section of the same transcripts, Kant defines nature as the "connection of appearances according to general laws" (*LM* 29:860) and later adds that "what happens in the sensible world is nature" (*LM* 29:862). Recalling the Third Antinomy, we need not be committed to the claim that all things that happen in nature are explicable only according to mechanical laws governing the "sensible world." Rather, Kant emphasizes that things *insofar as*

they appear to us in space and time and we empirically cognize them are part of nature *qua* sum total of sensible appearances. He accepts that there can be effects in nature which are grounded in sources we cannot empirically cognize, such as things in themselves (*LM* 29:924). Kant's most generic definitions of nature – "nature is also called, and indeed most often, the order of things according to general laws" (*LM* 29:934) – also leave it underdetermined what kinds of laws govern bodies in nature. General laws here could refer to the laws of mechanism, but they could just as easily refer to the laws of a final causality. Indeed, we shall that a main presupposition of the Antinomy of Teleological Judgment is that we cannot rule out the possibility that some material things are generation by non-mechanical laws (*CPJ* 5:387). The possibility that these laws can be either mechanical or teleological is reinforced by passages such as these: "physically nature is a realm of efficient causes, and teleologically [nature is] a realm of ends" (*LM* 29:915). There is a teleological, and not merely physical, way to consider nature.

In *On the use of teleological principles in philosophy*, Kant opens with a similar remark regarding the possibility of a teleological view of nature. He states, "If one understands by *nature* the sum-total of all that exists as determined by laws, taking together the world (as nature properly so called) and its supreme cause, then the investigation of nature (which in the first case is called physics, in the second metaphysics) can pursue two paths: either the merely *theoretical* path or the *teleological* path" (*OTP* 8:159). Once again, nature is generically construed as a sum-total of "all that exists as determined by laws", where the kind of law determining things that exist is not specified. Based on Kant's subsequent assertion about the courses that our investigations of nature can take, there are two ways of understanding nature. The theoretical path investigates nature only by means of empirical cognition, or experience (*OTP* 8:159). But this path turns out to be limited, and we "need to start from a teleological principle where theory abandons us" (ibid). Where

"sources of theoretical cognition are not sufficient," we are allowed to invoke teleological principles of nature (*OTP* 8:160). Moreover, Kant appears to be suggesting, theoretical cognition will inevitably fall short in our investigations of nature.

What I take Kant's lecture transcripts to show us is that, ultimately, the conditional established in the first *Critique* holds true. It is the case that *if* we empirically cognize objects of outer sense *then* they can be taken to be objects of nature, and whatever is not part of the sum total of unified appearances we call nature cannot be empirically cognized. But this leaves open the possibility that we can take something to be an object of nature without affirming the antecedent of the above conditional. While saying that something is not a natural object prevents us from saying it is empirically cognizable, there could be non-empirically-cognizable objects (or grounds) in (or behind) nature and its objects. Beyond the Analytic of the first *Critique* and the lecture transcripts, Kant suggests that we can have non-empirically-cognitive access to principles, laws, and objects of nature that are not merely determined by mechanical, deterministic laws.

Kant's remarks regarding the regulative use of our ideas in the Appendix to the Transcendental Dialectic as well as his discussion of reflecting judgment reinforce the possibility that some objects of nature are not merely the products of natural or external causes while also maintaining that we could not empirically cognize the means by which such natural objects come about. When discussing the regulative use of the idea of God, Kant states, "although an anatomist can be convicted of error when he relates some organ of an animal's body to an end which, as one can clearly show, does not follow from it, it is nevertheless quite impossible to **prove** in any one case that a natural arrangement, whatever it might be, has no end at all" (A688/B716). If one regulatively posits the existence of a highest intelligence that crafts the existence of the world in accordance with ends, then researchers, such as "medical physiologists", can extend their

investigations of nature in accordance with ends. As long as one is careful when deploying this principle of the purposive unity of nature regulatively, never venturing to assert the existence of a highest being as a constitutive principle, they can "extend the use of reason in regard to experience without doing damage to it in any individual case" (A691/B720). The regulative use of the idea of God helps us explain natural products teleologically without pretending to give us empirical cognition of those products.

Some of Kant's comments in and around the Antinomy of Teleological Judgment further indicate that it is possible for there to be natural objects that may not come about merely in accordance with external or natural causes. When reflecting upon the form of certain objects in nature, experience leads our power of judgment to the concept of a natural end (see §64 of the *Critique of the Power of Judgment*). A natural end functions in accordance with a causality that we could not experience – i.e., one directed by ends – but, as far as we can tell, resides in nature. In the following chapters, we will explore how precisely we can conceive of such an object as natural. For now, I reiterate that the concept of nature does not exclude the possibility of an organism, or a thing the generation and activity of which is the result of a non-mechanistic, purposive causality. If we take organisms to be things that function in accordance with a non-mechanistic, internally purposive causality, all that Kant's system bars us from doing is empirically cognizing the causality that characterizes an organism, not from holding that there are or can be organisms in nature.

2. Kant on machines

Before describing what the organism is at the level of conceptual analysis, we should also explicate its contrast term: the machine. When figuring out what machines are, we should begin by unpacking a vague but related term – "mechanism." We should think of a machine as a natural

object the motion of which is exclusively and exhaustively explained in terms of the mechanistic causality.

At first, Kant's notion of mechanism seems vague because it is used in a number of ways depending on context. Angela Breitenbach's entry for "mechanism" in the *Cambridge Kant Lexicon* helpfully identifies just a few senses of the term, making it easier for us to zero in on which, specifically, is at issue in the context of the *Critique of the Power of Judgment*. Most broadly, Breitenbach characterizes this term as a "causal necessity." She cites this passage from the *Critique of Practical Reason* in defense of her characterization: "all necessity of events in time in accordance with the natural law of causality can be called the mechanism of nature" (*CPrR* 5:97). In the *Third Critique*, Breitenbach adds, Kant is directly concerned with the mechanism of matter (see *CPJ* 5:395). Even more specifically, the mechanism at issue here is that which concerns the effects that the parts of bodies have on one another "in accordance with mere laws of motion" (*CPJ* 5:390). The key contrast term here, to Breitenbach, is natural teleology, or the idea invoked to explain that certain natural things are mechanically inexplicable have a "self-propagating formative power" (*CPJ* 5:374). The language here suggests that there is a power internal, not external, to the moving thing that explains its movement.

Building off Breitenbach's suggestion, I believe that the kind of mechanism at issue in the third *Critique* is the conception of causality that describes how machines commence with and cease motion. In contrast to organisms, machines are aggregates of matter fundamentally driven by external causal principles. All of a machine's changes in state are changes of matter, and all changes of matter are subject to the Law of Inertia, as characterized in the *Metaphysical Foundations of Natural Science*: "Every change in matter has an external cause." Kant derives this law of mechanics from the initial premise that "Matter, as mere object of the outer senses, has

no other determinations except those of external relations in space" (*MFNS* 4:543). All determinations of some material object are observable in space and time. For any change of state in matter, we must seek a cause ("by the principle of metaphysics"). But matter, "as a mere object of the outer senses", lacks any "essentially internal determinations or grounds of determination" (ibid). In other words, a material body is such that, by its very nature, it has to be set in motion or stopped by means of a causal influence exerted upon it by some outside material body. Since a material body cannot have any internal determination or ground of determination, its ground of determination must be external.[21] Thus, every change in matter has an external (and not an internal) cause.

Machines can only be moved in accordance with external principles of motion, and their external principles of motion will bring about changes in matter that are explained by some antecedent change in matter, *ad infinitum*. But note that Kant contrasts the external grounds of determination that explain a machine's material changes in state with *internal* grounds of determination. In the previous chapter, I proposed that purposiveness is a causality that has internal principles as its grounds. If mechanism is a causality that has external principles as its grounds, we might think of mechanism and purposiveness as such as the relevant contrast terms at issue here. However, in the third *Critique*, Kant is at pains to contrast mechanism with the form of causality characteristic of *organisms* in particular – that is, a real, objective, inner purposiveness. While machines are fundamentally characterized by the mechanistic causality described above, organisms are fundamentally characterized by the purposive causality I turn to discussing next.

But to say that machines function in accordance with the laws of mechanism is not to say that they are totally inimical to every kind of purposiveness. Machines surely cannot act in

[21] Presumably, a suppressed premise in this argument states that all grounds of determination of a substance are either internal or external.

accordance with *inner* purposes, for that is reserved for living organisms, as we shall see below. However, we can understand machines as *relatively* purposive. That is, machines can be built so as to serve the purposiveness of another agent's purposiveness. A panini press, for instance, is a mere machine that has the end of grilling pressed sandwiches. But that end serves the purposiveness of the agent who eventually consumes the sandwich produced by the panini press. Strictly speaking, we can understand the activity of the panini press as end-directed, but the true ends of the panini press reside in a living being – in this case, the hungry human being preparing their lunch. Ultimately, what separates a machine from an organism is not that it cannot be purposive at all. Rather, a machine is incapable of being *internally* purposive, or acting in accordance with ends that are good for its own sake. A machine can only be an instrument for the achievement of some internally purposive agent's ends.

3. Kant on organisms

An organism and a machine are opposed in kind at the level of conceptual analysis. On the one hand, machines are material objects set in motion merely by means of external principles. On the other hand, organisms are objects that, from one perspective, are determined by external principles, but can also be set in motion by internal principles. In other words, organisms are *internally purposive*.[22]

As we saw in the previous chapter, certain natural things have a particular kind of purposiveness – they are objectively, actually, and internally purposive. Objective purposiveness, in contrast to subjective purposiveness, is a kind of causality that has *a concept* as its principle.

[22] It is worth noting that Kant himself never labels anything an "organism." In what follows, I piece together a conception of the "organism" that is consistent with Kant's theory of purposiveness. Ensuing uses of the term refer back to the conception of organism developed in this section.

Sometimes, Kant characterizes the relevant concept as a thing's "perfection" (see *CPJ* 20:228). This concept of perfection is the ground of the unity of a complex manifold: i.e., "in order to represent an objective purposiveness in a thing the concept **of what sort of thing it is supposed to be** must come first; and the agreement of the manifold in the thing with this concept (which supplies the rule for the combination of the manifold in it) is the **qualitative perfection** of a thing" (*CPJ* 5:227). Defined in terms of perfection, an objective purposiveness is a causality according to which an antecedent concept of what a thing is supposed to be determines what the thing is. But Kant provides an even more specific principle of purposiveness when dividing the into formal and real kinds of objective purposiveness. A real objective purposiveness is "dependent on the concept of an end" (*CPJ* 5:364). An objective material purposiveness, which is attributed to a thing on the basis of a teleological judgment, is a causality according to which *a concept of an end* determines the activity and organization of a thing. We get an even clearer glimpse into what this might mean when Kant subdivides objective real purposiveness into two further kinds – namely, objective real *relative* purposiveness and objective real *inner* purposiveness. The relative kind of this purposiveness characterizes artifacts and the inner kind of this purposiveness characterizes organisms.

The activity of an artifact is explained by the ends of some purposiveness besides that of the artifact's. For instance, my oven toasts a bagel not for the sake of its own ends, but for the sake of my end of nourishing myself. I can attribute an objective, real purposiveness to my oven – its activity is explained by the end of nourishing me. But that end is ultimately in some purposive thing besides the oven, hence its status as a thing that is only *relatively* purposive.

Unlike the oven, the ends conditioning the purposive activity of what I label an organism reside "in" the organism. Furthermore, the end within an objectively, really, and internally

purposive thing determines the activity and the structure of the thing in a manner distinct from how external grounds determine a machine's changes in state. "It might always be possible that in, e.g., an animal body, many parts could be conceived as consequences of merely mechanical laws (such as skin, hair and bones). Yet the cause that provides the appropriate material, modifies it, forms it, and deposits it in its appropriate place must always be judged teleologically, so that everything in it must be considered as organized" (*CPJ* 5:377). The activities and the structure of an organism can be explained in terms of "merely mechanical laws"; it is possible to explain the material constitution of an animal, for instance, by tracing its material state back to an antecedent, external material cause. The scar on the side of an elk can be explained by the fact that a cheetah attempted to hunt and kill it previously. However, there is another way of explaining the parts of an animal and their organization. The heart of an elk pumps blood in order to circulate blood throughout its body. Presumably, this is because circulating blood through its body is good for its survival. In this sense, an end – survival – is the cause of the activity and the organization of the parts of the elk.

Notice that, while survival is the kind of thing that is taken to be the principle characteristic of an organism's causality, it is not an external principle of activity. In other words, "survival" does not describe a state of matter that brings about a subsequent change in matter. Rather, survival describes a causal principle that is *internal* to the elk and not reducible to a material fact about the elk. If we did not invoke the ends of things as the internal principles of their structure and activity, Kant warns, the structure of these objects would be "in the highest degree contingent" (*CPJ* 5:360). If it were conditioned by mechanism alone, nature could have formed these objects "in a thousand different ways without hitting precisely upon the unity in accordance with" a teleological causality (*CPJ* 5:360). Thus, when describing the form and the organization of the elk, we say that its parts

are arranged in such and such a way, it performs the activities that it does, and it communes with its fellow elk in such and such a way *in order to* survive, and its survival is an immaterial, internal ground of determination that explains why the elk looks, acts, and interacts the way that it does.

We are now in a good position to see what exactly makes the concept of an organism distinct from the concept of a machine to Kant. The activity of (what I call) an organism is in some cases explicable in purely mechanistic terms; crucially, in other cases, we must appeal to internal principles to explain the organism's activities and structure. These principles are *ends* of the organism built into it by nature. Ends ground the organization of an organism's parts and its activities in a way that external changes in matter simply cannot. As Kant puts it, we explain a tree's growth "in such a way that it is entirely distinct from any other increase in magnitude in accordance with mere mechanical laws," because the tree "first prepares the matter that it adds to itself with a quality peculiar to its species, which could not be provided by the mechanism of nature outside of it" (*CPJ* 5:371). Whereas machines are only changed by external grounds of determination, organisms such as trees possess ends as internal grounds of determination, and these ends guide the organism's self-organizing activities, such as growth, reproduction, self-maintenance, and so forth. The difference between organism and machine is thus spelled out in terms of being's ability to express a fundamentally non-mechanistic power:

> An organized being is thus not a mere machine, because that has solely a *motive* power; while an organized being possesses in itself a *formative* power {bildende Kraft}, and indeed one that it communicates to the matter, which does not have it (it organizes the latter): thus it [i.e., the organized being] has a self-propagating formative power {bildende Kraft}, which cannot be explained through the capacity for movement alone (that is, mechanism). (*CPJ* 5:374)

This power, I argue below, is the expression of an organism's life – or its capacity to determine itself in accordance with inner, not just external, principles.

If we take the activity of an organism to be inner-principle-driven, remarks Kant makes about chemistry might lead us to suspect that the activity of an organism is similar to – if not identical in kind with – a chemical process. After all, Kant in the *Metaphysical Foundations*, Kant has the following to say about the difference between mechanical changes in motion and chemical reactions: "The effect of bodies in motion upon one another by communicating their motion is called **mechanical**; but that of material things, insofar as they mutually change the association of their parts, even at rest, through their own powers, is called **chemical**" (my translation, AK *MFNS*: 530). Chemical processes are brought about by powers internal to a materially changing thing. The result is the generation of a new material thing: "In chemistry one distinguishes matter, as *educed* <*tanquam eductum*> - what was previously there and only receives new form; as *produced* <*tanquam productum*>, what was not previously there at all" (*LM* 28:684). However, it's worth pointing out that chemical reactions might involve internal changes, but those internal changes are always thoroughly material, involving material things that "penetrate one another":

> If two matters fill one and the same space, and each of them does this completely, they penetrate one another. Hence a complete chemical dissolution would be a penetration of matters, *which would nonetheless be entirely different from mechanical penetration*. For in the latter case it is thought that, as the moved matters approach one another more closely, the repulsive force of the one can completely surpass that of the other, so that one or both can have their extension shrink to nothing. Here, by contrast, *the extension remains*, and it is only that the matters together occupy a space, which accords with the sum of their densities, not outside, but inside one another, that is, through intussusception (as it is customarily called). (*MFNS* 4:530-531)

Notice that "extension remains" in this context. That is, the impetus and the reaction of the chemical process are both, strictly speaking, objects of outer sense, things that we can behold in space and time. As Michael Bennet McNulty reiterates, chemical processes might involve an "inner" principle in some sense, but they are material through and through, consisting of a material principle exercising a material power to bring about a material effect "As Kant puts it, chemical

changes transform "the innermost constitution of matter" [*die Beschaffenheit der Materie innigst*], chemical forces are those "constitutive powers of matter whereby new matters are brought forth" [*die constitutiven Kräfte der Materie wodurch neue Materien hervorgebracht werden*], and chemistry concerns how the such forces "produce a new matter [*eine neue Materie aus machen*] (*LM* 29: 117.12, 22 f.,31)" (McNulty 2018, 539)

The fact that chemical processes involve internal processes in some sense, but those internal processes are still locatable in space and time, sufficiently distinguishes them from the living activity of the organism. As we shall see, the ends or internal principles that serve as the ground of living organic activity are not locatable in space and time. We cannot empirically cognize the causality characteristic of these entities. While we can empirically cognize all the components of a chemical reaction, submitting it to mechanical laws, the fact that we cannot empirically cognize all the steps and components of organic activities means that the organism's form and activity cannot be explained by appeal to purely mechanical laws.

4. Conclusion

Above, I show that organisms and machines are fundamentally distinct concepts for Kant in the following sense. While the activities and the structure of a machine are explained merely by external causes, organisms are the kinds of thing whose activity and structure can also be explained by means of a certain kind of internal principle. Moreover, though we may think that domains such as chemistry offer us a tool for reducing organic activity to its mechanistic correlates, this is not the case. Organisms are different from machines in that they exhibit a form of causality that is completely distinct in kind from mechanistic activity. Perhaps most importantly, we also saw that Kant's very concept of nature does not prevent us from thinking that there can be organisms in

nature. We shall reserve a more thorough exploration of whether there are organisms in nature for Part II. For the time being, let us turn to an analysis of Kant's concept of life, which we shall see is intimately connected to his account of the organism, allowing us to distinguish between various kinds of organism.

Chapter 3. Kant on life and value

In the previous chapter, we analyzed Kant's concepts of machine, organism, and nature to show that his concept of nature does not exclude the possibility that there are organisms in nature. Organisms are internally purposive entities, or things capable of acting in accordance with purposes that are (somehow) internal to them.

In this chapter, I flesh out Kant's concept of the organism by analyzing what he takes life to be. Life, I argue, is a faculty of a substance to act in accordance with inner principles. Following my analysis of purposiveness in the previous chapter, this means that we can alternatively gloss life as a substance's in-built faculty of purposiveness. As an organism just is the kind of thing that has a purposive causality built into it by nature, I suggest that life is the faculty an organism exercises in order to perform its self-organizing activity. In other words, if an organism did not possess a faculty of life, it could not determine itself in accordance with ends. Possessing a faculty of life is necessary for organic activity.

In section 1, I analyze the organism's faculty of self-activity – that is, life. I argue that, in its most generic sense, life is a faculty of a substance to determine itself in accordance with inner principles. Against the consensus in the literature, Kant does not build representation into the most generic definition of life. Thus, there are some forms of life that are fundamentally propelled by representations – e.g., human life and non-human animal life – but it is at least conceivable that there could be non- or sub-representational forms of life. In section 2, I turn to the question, What exactly is the inner principle driving organic life? I argue that we should read Kant as a forerunner to a recent current in the philosophy of life and biological theory, one that takes life to be that which imposes unity in accordance with value.

1. Kant on life

Organisms are the kind of things that exercise a power to organize themselves in accordance with a particular kind of internal principle – i.e., an end. However, the ability to exercise a power presupposes the possession of a *capacity* to exercise such a power. I cannot intuit unless I possess a capacity for sensing; I cannot think unless I possess a capacity for understanding; I cannot comprehend unless I possess a capacity for reason; and so on. In this section, I show that we can piece together remarks Kant makes about life throughout the Critical period to reconstruct the following theory of life: to Kant, life is the capacity of a substance to act in accordance with inner principles. Now, an organism is a thing that acts in accordance with inner principles (i.e., ends). So, in order to exercise this activity, an organism must have the capacity to act in accordance with such principles. Life just is that capacity. Just as it is the case that if *x* does not possess a faculty of sensibility then *x* cannot intuit, so too it is the case that if *x* is not alive, *x* cannot perform the activities characteristic of an organism.[23]

On my reconstruction, Kant distinguishes between various senses of life, some of which are more generic and others more specific. I characterize the various senses of life as Kant's "levels" of life. The most generic definition of life – or Kant's Level 1 definition, as I call it below, states that life is the capacity of a substance to determine itself in accordance with inner principles. To borrow Kant's parlance, this is all that is contained *within* the concept life. However, there are marks contained *under* the concept that correspond to various divisions of life.[24] Kant introduces

[23] Note: Endorsing the claim that for Kant life is a necessary condition for a thing's being an organism is not an entirely original one (see Nunez 2021 and Leland 2020), although as far as I can see, I pursue a new way of developing Kant's concept of life and its function below. Beyond the Kant literature, philosophers have argued for the claim that something can be an organism only if it possesses life (see Shields 2012 and 2017).

[24] The following passage from the *Vienna* logic lectures should give us a better sense of the difference between the content *within* a concept and the content *under* a concept:

> A universal concept has a sphaera, and has lower concepts under itself. We investigate these lower ones insofar as the lower concepts are distinguished from one another. Division is thus the complete representation [of these lower concepts] insofar as they are considered according to their differences, in which, taken

one such division when he announces that the inner principles determining a thing's activity can be a representation – an announcement that in turn entails there may be non-representational inner principles.[25] Further subdivisions (and subdivisions within subdivisions) are introduced as Kant modifies the various kinds of representational activities and objects of representation capable of grounding living activity. *Figure 2* depicts the marks contained within and under the concept in the form of a tree diagram.

> together, they are equal to the sphaera of the whole concepts. E.g., all beings on earth are organized and not organized. The organized ones are plants or animals. Logical division is nothing other than the taking apart of the sphaera of a concept. This dividing is something other than taking apart. In the case of division, I distinguish the manifold under the concept, i.e., the sphaera. In the case of taking apart, I analyze the concept. (*LL* 24: 925)

The various divisions and subdivisions of life disclose species and subspecies of the generic concept in question. In this case, "organized" and "not organized" are divisions of the concept "beings on earth" that "distinguish the manifold under the concept. In contrast, analyzing the concept is a matter of "taking it apart." As we will see below, the constituent parts of the concept <life> can be summed up as the capacity of a thing to determine itself in accordance with inner principles. Kant will introduce divisions and subdivisions to this primary definition, thereby revealing the full "*spaera*" of the concept.

[25] In the *Vienna* transcript, Kant states that logical division divides a concept into two exact classes (*LL* 24: 928). The first class conjoins a dividing concept with the divided concept (in this case, "representational" is conjoined with "life"). The second class conjoins the negated dividing concept ("non-representational") with the divided concept ("life"). My account of life's content will follow this rule of logical division.

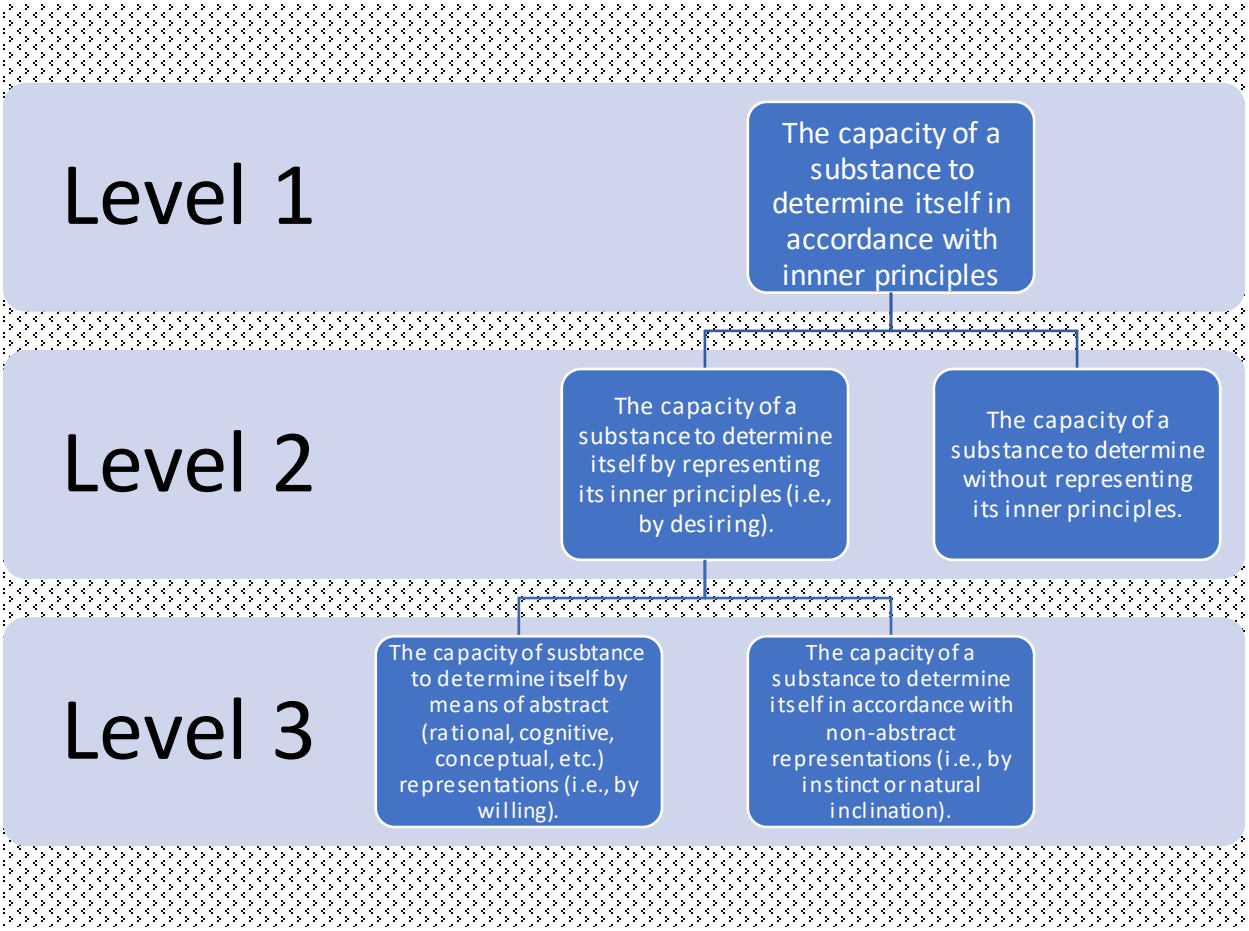

Figure 2. A schematic representation of the levels of life in Kant's system[26]

On my view, Level 1 discloses the marks contained within the concept <life>. That is to say, if a thing did not exhibit the capacity to determine itself in accordance with inner principles, it would not be alive. Level 2 represents the first division of the concept life. Here, I divide living things capable of representing their inner principles from living things that do not represent their inner principles. At Level 3, I divide living things that represent abstract inner principles to themselves, such as ideas of reason, from living things that represent non-abstract representations

[26] It should be noted that this division of the levels of life is conspicuously Aristotelian. If my reading of Kant is on the right track, it is indeed the case that the Kantian taxonomy of living things mirrors (and builds upon) Aristotle's taxonomy. For more on Aristotle's view of the divisions of life, see Johnson 2018.

to themselves as inner principles, such as sensations. Thus, at Level 3 Kant divides rational living beings (e.g., human beings) from non-rational living beings (e.g., animals).

1.1.Level 1 life

Evidence for Kant's most generic definition of life can be found in the remark to the Kant's discussion of the Second Law of Mechanics in the *Metaphysical Foundations of Natural Science*. Here, Kant asserts that human beings have privileged access to the structure of their own life, writing,

> *Life* is the faculty of a *substance* to determine itself to act from an *internal principle*, of a *finite substance* to change, and of a *material substance* to motion or rest, as change of its state. Now **we are acquainted with** [**kennen wir**] no other internal principle in a substance for changing its state except *desiring*, and no other internal activity at all except *thinking*, together with that which depends on it, the *feeling* of pleasure or displeasure, and *desire* or willing. (*MFNS* 4:544, translation modified, my emphasis in bold)

Notice that this passage is divided into two parts. The first gives a generic definition of life. The second describes the particular principle and activities of life with which we (i.e., human beings) are "acquainted".[27] On my reading, the fact that we are acquainted with a particular form or structure of life does not entail that this is the only kind of life of which we can conceive. Indeed, Kant's definition allows us to reject this possibility. As we saw in the previous chapter, purposiveness is a causality that has inner principles as its grounds of determination. In our discussion of purposiveness, we saw that inner principles need not be concepts. For all we know, they need not be representations at all – in some cases, mere *feelings* serve as inner principles.

[27] Throughout his lectures on logic, Kant places acquaintance [*Kennen*, *noscere*] within a hierarchy of degrees of cognition. Cognitions lower in the hierarchy, or of a lesser degree, are less distinct than those in a higher wrung. The Blomberg lecture transcripts state that acquaintance occurs when a representation is combined with "the capacity of bringing what I represent under a universal concept, and thus of being able to know to what my representation is actually related" (*LL* 24:133). When I am acquainted with an object, I cannot sort my representation of the object under a distinct concept, for that would be to understand the object. Still, I have some grasp of the object that is more maximal than a mere representation or even a perception, which is a representation of which I am conscious (*LL* 24:731). Furthermore, as the *Jäsche Logic* notes, acquaintance allows us to represent something "in comparison with other things, both as to *sameness* and as to *difference*" (*LL* 24:65), though it is a kind of comparison so basic that even an animal is capable of it.

Inner principles can, but need not be, representational. So, activity in accordance with inner principles can, but need not, involve representations. This explains why, on Kant's account, it is possible for us to at least conceive of irrational life. A tree regrows its branches and leaves because such "self-help" is conducive to its survival. But its end of survival need not be a conscious representation that the tree reflects upon in the process of regrowing its branches and leaves. What precisely that internal ground of activity is we cannot know. Still, this does not prohibit us from conceiving of the tree's life in such a way that the inner principles determining it are sub- or non-representational.

We also see this generic conception of life in Kant's *Lectures on Metaphysics*. For instance, in a proof of the immortality of the soul from the *Metaphysik Mrongovius*, Kant defines matter as that which is inherently lifeless. It is inherently lifeless insofar as it has no faculty "for determining itself", suggesting that a material body's "principle of life is something other than matter" (*LM* 29:913). From this, it follows that matter "has mere receptivity or passivity." In contrast, life is a "spontaneity or the faculty for determining oneself from inner principles" (ibid). Once again, in this context Kant does not specify precisely what those inner principles are. They could be representations such as ideas, desires, concepts, and so forth. What matters is that the principles associated with the faculty of life are not external causes, but internal ones.

1.2. Level 2 life

Level 2 of *Figure 2* depicts the first division Kant introduces to the concept <life>. There are representational and non-representational forms of life. The following passages scattered throughout primary texts and lecture notes reinforce this relationship between life and representation:

> The capacity of a being to act according to **its representations** is called life. (*LM* 6:211, emphasis in bold added)

> **We have an inner principle for acting from representations, and that is life**. Now if a representation harmonizes with the entire power of the mind, with the principle of life, then this is *pleasure*. But if the representation is of the kind that resists the principle of life, then this relation of conflict in us is *displeasure*. Objects are accordingly beautiful, ugly, etc. […] in reference to living beings. *But what takes place only in reference to living beings, of that the ground must be in the living being*; accordingly there must be a faculty in the living being for perceiving such properties in objects. Pleasure and displeasure is thus a faculty of the agreement or of the conflict of the principle of life with respect to certain representations or impressions of objects. (*LM* 28:247, emphasis in bold added)
>
> Besides the things which are moved by outer causes, there are living things which are moved by inner ones. **A being is living if its power of representation can be the ground of the actuality of its objects. Life is thus the causality of a representation with respect to the actuality of its objects**. (*LM* 29:894, emphasis in bold added)

These passages reinforce the idea that representation in general, not any faculty of representation in particular, is the power that a living substance exercises to determine itself. The kind of representing employed is left undetermined, meaning that the activity of life could hypothetically be the activity of intuiting, sensing, thinking, or any number of representational activities. Furthermore, while life is here represented as a kind of causality, and a representation is depicted as the cause which brings about a certain effect (i.e., the "actuality of its objects), the kind of representation determining living action is left unspecified. That is, an intuition, a concept, an idea, or any number of ideas could conceivably ground the causality of living substance.

Some commentators have taken these passages to represent Kant's definition of life. In other words, they have denied the existence of Level 1 and instead taken a division introduced at Level 2 as Kant's most generic definition of life. For now, I want to emphasize that, while the passages discussed here may seem like definitions, they are only characterizations of life. More specifically, seeing as these characterizations are given in Kant's psychology lectures, we should be inclined to consider them characterizations of *animal* life in general (i.e., including human life, since human beings are animals): "Animals are not mere machines or matter, rather they have

souls; for everything in the whole of nature is either inanimate or animate. […] An animal is thus an animated matter, for life is the faculty for determining oneself from an inner principle according to the power of choice" (*LM* 28:274-5). While animals in general determine themselves in accordance with the power of choice, minded human life and mere animal life are importantly different. Human beings will have access to concepts and ideas, and on the basis of that have a will. Animals do not. Still, as Kant insists elsewhere, to say that animals "act only according to general laws of matter" is misguided and "to think of animals as machines is impossible", for we call animals alive and take them to have a faculty to "alter its own state as a consequence of its own representations" (*LM* 28:449).[28]

Crucially, in places such as §VIII of the first introduction to the *Critique of the Power of Judgment*, Kant identifies desire as "**the faculty for being, through its representations, the cause of the reality of these representations**" (*CPJ* 20:230n). That is, desire is a faculty according to which a representation serves as the ground of the reality of its object. Thus, we should conclude, to be the sort of living thing that can bring about the reality of its actions or objects as a result of representing that action or object to itself is to be a living thing that desires. Kant's remarks in a long footnote within the Preface to the *Critique of Practical Reason* reinforce this understanding of desire in relation to life. Here, Kant is attempting to refute the idea that the supreme principle of his practical philosophy is empirical. A key piece of this refutation is his definition of the faculty of desire, which states that "Life is the faculty of a being to act in accordance with the laws of the faculty of desire. The faculty of desire is a being's *faculty to be by means of its representations the cause of the reality of the objects of these representations*." (*CPrR* 5:9n) This passage is striking

[28] Consider, too, Kant's remarks in the *Metaphysik Dohna*: "The subject of representation in each living being is something different from matter, and animals have souls. The soul of an animal as brute soul <*anima bruti*> can develop itself to infinity, grow, but always only sensitively, never up to a rational being." (*LM* 28:690)

for several reasons. First and foremost, it emphasizes the intimate connection between life and desire. Life, it seems, simply is the ability to act in accordance with "the laws of the faculty of desire," laws which sometimes come from practical reason and sometimes come from nature.[29] In addition, this passage is striking because it reinforces the idea that a living, desiring being is subject to a kind of causality that does not depend on forces external to it. The following line of the passage above seems to reinforce this claim, defining the faculty of desire as a being's faculty to bring about the reality of an object it represents to itself by means of this representation. While initially appearing vague and unintuitive, this definition is actually quite insightful. On the one hand, a being's actions are conditioned by external causes. Detecting the scent of coffee attracts me to pot of coffee in the kitchen, whence the scent originates. In this case, the reality of the pot of the coffee, the scent emanating from it, and my detection of that scent condition my actions. On the other hand, a being's actions may be conditioned by causes other than these external ones. For instance, I may want some coffee, but find that there is no coffee in the kitchen. The absence of coffee coupled with my desire for some leads me to take the necessary steps to make some coffee, or to cause the reality of a heretofore merely represented pot of coffee. In this case, my representation of some future pot of coffee conditions the process of making coffee, exemplifying an action performed in accordance with the faculty of desire and its laws.

[29] In the *Critique of the Power of Judgment*, Kant indicates that the faculty of reason is that from which the *a priori* principles of the faculty of desire are set: "for the **faculty of desire** it is reason, which is practical without the mediation of any sort of pleasure, wherever it might come from, and determines for this faculty, as a higher faculty, the final end, which at the same time brings with it the pure intellectual satisfaction in the object" (*CPJ* 5:197). This might suggest that the laws of the faculty of desire are exclusively intellectual or rational. However, it is worth noting that Kant distinguishes between natural laws and laws of freedom in the *Groundwork of the Metaphysics of Morals* and bringing that distinction to bear in the present context. It may be the case that reason dictates the laws of the faculty of desire for rational creatures. Humans, for instance, can desire the highest good and immortality, acting so as to bring these ends of practical reason about. Humans may also have desires tied to nature. For instance, a human being cannot subsist without nourishing itself, and its desires are conditioned by this natural limitation. Thus, when a human being desires food, it does not seem as if the desires here are fixed by laws of the faculty of practical reason. Instead, these desires seem related to laws of nature. This is why Kant qualifies that the faculty of desire is legislated by practical reason when we conceive of it as a "higher faculty in accordance with the concept of freedom" (*CPJ* 5:178). Lacking any such qualification, we may think of the laws of the faculty of desire as either laws of freedom or laws of nature.

The definitions of desire offered in each of the footnotes quoted above combine to give us one branch of the initial division of life. For some living beings, inner principles can be represented, and it is only those living beings that desire. But for other beings, we could imagine that their inner purposiveness involves something more crude than representational desires. Consider, for instance, Kant's characterization of the power we attribute to an internally, materially, and objectively purposive thing as a special "formative power" (*CPJ* 5:374). In this context, when we attribute such a non-mechanistic power to a self-organizing natural end, we are stating that it has a purposive causality. It possesses a plan according to which it organizes its parts as it grows, develops, heals itself, and so forth.

While we may think that this formative power talk does not correspond to a view Kant would want to stipulate himself, some of Kant's remarks regarding epigenetic theories of the origin of organisms might lead us to think that he finds such an account of organic activity plausible. In the Methodology of the *Critique of the Teleological Power of Judgment*, Kant states that the epigenetic theorist has greater "experiential grounds" for proving their theory and that reason is "favorably disposed to this explanation because it considers nature, at least as far as its propagation is concerned, as itself producing rather than merely developing those things that can initially be represented as possible only in accordance with the causality of ends" (*CPJ* 5:424). Thus, "with the least possible appeal to the supernatural," the epigenetic theorist can explain how organisms reproduce without "determining anything" about the first beginnings of nature (*CPJ* 5:424). Blumenbach attributes purposiveness to natural products and without violating the laws of mechanism in his musings on epigenetics, according to Kant, for he affirms that matter is lifeless, still reserves a role for the material, but holds that matter must be shaped by a faculty, or a "formative drive" [*Bildungstrieb*] (*CPJ* 5:424). In this way, Kant seems to be informally endorsing

the view that natural products possess a non-material formative power for shaping otherwise unshaped the otherwise raw materials of which they are composed. There is no mention of concepts or representations guiding this formative power.

The possession of such a power is consistent with Kant's remarks when discussing a tree's ability to grow. He states that "in the separation and new composition of this raw material" belonging to a tree, we witness an "originality of its capacity for separation and formation [*Scheidungs- und Bildungsvermögen*] in this kind of natural being that remains infinitely far removed from that of all fine art [*Kunst*]" (*CPJ* 5:371). In these passages, a tree is depicted as the kind of entity that possesses capacities and powers for self-directed activity. Its capacities and powers, to boot, betray an organization that exceeds that of fine art in its refinement. These signs point to the presence of a real, objective, inner purposiveness in the vegetable kingdom.

Though we might imagine that the inner principle involved in the activity of an ensouled being is representational, Kant need not be committed to such a claim. Indeed, there are cases in which Kant appears to endorse an alternative, non-representational kind of teleology in Critical period writings, such as the *Idea for a Universal History*: "*All natural predispositions of a creature are determined sometime to develop themselves completely and purposively.* With all animals, external as well as internal or analytical observation confirms this. An organ that is not to be used, an arrangement that does not attain to its end, is a contradiction in the teleological doctrine of nature" (*Idea* 8:18). This "teleological doctrine of nature" proposes that there is an "*aim of nature"* (*Idea* 8:18) that is not rational. Natural predispositions in animals develop purposively. Combining this with an understanding of purposiveness as a kind of causality according to which inner principles ground the reality of their consequences suggests an account of the animal according to which its predispositions are internal principles, guiding a real, objective, inner purposiveness built

into it by nature. What Kant could be a suggesting here is a quasi-Aristotelian kind of ensoulment, which states that the soul animates the living body by mobilizing it in accordance with in-built ends.

Indeed, one ramification of this picture of organic teleology is that it draws Kant's position very close to Aristotle's. In the *De anima*, Aristotle defines the soul as the "first actuality (*entelékheia*) of an organic natural body" (*DA* II.1, 412b5-6).[30] One way of beginning to parse this notorious definition of the soul is to scrutinize the term "first actuality." A first actuality, or an *entelékheia*, is literally that which has (*échein*) ends in it (*enteles*). On Aristotle's view, a soul, one might say, is that which contains the ends of a natural organic body. While such a body is distinguished from a non-organic body on the basis that it is capable of receiving life, the soul as *entelékheia* is that which actualizes the life of such a body; it is what animates what is merely potentially a living body. The way in which it animates the body is by inducing motion in the body for the sake of certain ends. For instance, in the case of a nutritive soul, the ends of nourishment and reproduction animate a plant and explain why it spreads its roots in a certain direction, grows to a certain height, and so forth; animals possess nutritive, appetite, and perceptive "souls", explaining why an animal moves toward prey and averts predators; and a human being possesses all of these as well as an intellective soul, which would explain why a human being pursues abstract ends such as knowledge and wisdom (see *DA* ii 3, 414a31-2).[31]

[30] Life and ensoulment are also tightly interrelated, to Aristotle. Elsewhere in *De anima* II he defines the soul as "the first actuality of a natural body which has life in potency" (*DA* II.1, 412a19-21) and as the "form" of a natural body capable of life (ibid). The soul, in other words, is that which animates or gives form only to bodies capable of living. Without a soul, such a being's potency to live would remain unactualized, which is precisely why Aristotle states that the "soul is that primarily in virtue of which we live" (*DA* ii 2, 414a12-13). On the Aristotelian view, a soul is essential to living beings.

[31] Chapter 6 of Monte Johnson's *Aristotle on Teleology* (2006) explains that Aristotle's discussion of the soul reinforces a general theme in his philosophy: namely, that organisms should be explained not merely in mechanical or efficient causal terms, but also in teleological terms.

In short, Aristotle seems to have developed a teleological, or purposive, understanding of the soul. An organism is a combination of soul and body. While the body is that which is capable of receiving life, a soul is that which breathes life into an organic body. To breathe life into such a body is to induce motion in the body for the sake of certain ends essential to that soul. Again, the ends of nourishment and reproduction are, in some sense, built into the nutritive soul, and so all living things strive to nourish themselves and reproduce their species. Aristotle does not appeal to representation to explain why or how a soul induces motion in a living body. An organism simply has its ends in it and observing the organism in motion allows us to deduce that it is acting for the sake of those ends.

Likewise, according to the Level 1 definition of life, we need not invoke representation talk to explain the life of the organism. As long as we conceive of the ends of the tree as internal to it and explain the tree as that which exists for the sake of its ends (nourishment, reproduction, self-regulation, and so on), we can (perhaps should) forego attributing representations to the tree. After all, we cannot know what it is like to be a tree. While it is clear that a tree's existence is explainable in non-mechanical, teleological terms, it suffices for us to attribute ends to the tree without adjudicating on whether those ends are mental states or not. Yet, along with Aristotle, we may maintain that the purposive activity of a substance is indicative of its being ensouled, or its possessing the minimum prerequisite for being counted among the living.

Since trees are not taken by Kant to possess concepts (and likely not representations either) but can still be understood to act in accordance with ends, there must be kinds of purposiveness that are non-representational. Because life is a faculty of inner purposiveness, it follows that there may be kinds of life that exercise a non-representational purposiveness. So, while commentators such as Alexandra Newton (2017) have taken the characterizations of life involving desire to be

definitive of Kant's views on the subject, attributing to him the view that only animals and humans are alive, on my account it is still possible to extend life to plants. We can conceive of plants as exercising a capacity for life that does not involve representations and therefore not involving desire.

1.3. Level 3 life

Whereas Level 2 distinguishes between living things capable of representing on the one hand and living things that are not capable of representing on the other hand, Level 3 marks a further distinction within the class of only those living things that represent. Some living things have robustly rational capacities for representing. Other living beings, such as non-human animals, are limited to irrational capacities for representing.

As the passage from the *Metaphysical Foundations* quoted above states, we have intimate acquaintance with a form of life that takes desires as its internal principle and uses that to condition activities of thinking, feeling, and willing. Rational living beings possess a faculty of thought and a will in addition to desiring. Kant defines the will in relation to both the faculty of desire and thought in §10 of the *Critique of the Power of Judgment*. "The faculty of desire," he writes, "insofar as it is determinable only through concepts, i.e., to act in accordance with the representation of an end, would be the will" (*CPJ* 5:220). As we saw above, the faculty of desire is a being's capacity to be, by means of its representations, that which brings about the objects of its representations. When the representation guiding that process of realization is a particular kind of concept (that is, a concept of an end), Kant is now adding that the faculty of desire is actually the faculty of volition,

or the will.[32] For a rational being, which possesses concepts and a will, life is the capacity of a thing to determine its state by thinking about, and subsequently willing, the objects of its desires.

Kant clearly maintains that animals are alive but rejects that they have robust cognitive capacities like the understanding or apperception. In the introduction to their edited volume Kant and Animals, Lucy Allais and John Callanan cite textual evidence for the claims that Kant believes animals have a power of choice, the ability to feel sensible impulses, experience subjective necessity, and may possess many other fairly robust mental capacities (see 2020, pp. 2-3). Kant even says that "We call an animal alive because it has a faculty to alter its own state as a consequence of its own representations" (*LM* 28: 449). However, Kant stops short of saying that animals think with concepts. As Naomi Fisher helpfully summarizes in their article "Kant on animal minds,"

> But as is clear from the first sentence of the *Anthropology*, animals have no 'I', no unity of apperception, and no consciousness (*Anth* 7:127; LM 28:276). Furthermore, animals have no understanding, and so cannot cognize objects (*Logik* 9:64–5) and they have no concepts (*Logik* 24:702), since the understanding is the faculty for the use of concepts. Moreover, they lack the capacity to make judgments; for example, since it lacks "the higher cognitive faculty" of the understanding, the ox cannot judge that the door belongs to the stable (*FS* 2:59). Because the understanding is that which takes the material from the senses and synthesizes this material into objective, conscious cognition, animals with no understanding are limited to the material from the senses. (Fisher 2017)

Kant also attributes "feelings and a faculty of desire" to "brutes" in his final letter to Marcus Herz (26 May 1789). On top of this, he seems to leave room for the possibility that even mollusks desire

[32] With this in mind, willful activity seems coextensive with living activity, with one important caveat; while the activity of life is determined by concepts generally construed, the activity of the will is determined by a particular kind of concept: namely, that of an end or a purpose.

Kant's definition of life in the *Metaphysical Foundations* portrays willing as an activity that works in tandem with thinking in the living subject. Thus, I argue that, insofar as the activity of life is willful, we should say that this activity is end-directed, or *purposive*. Kant's transcendental definition of an end states that it is "the object of a concept insofar as the latter is regarded as the cause of a former (the real ground of its possibility); and the causality of a **concept** with regard to its **object** is purposiveness (*forma finalis*)" (*CPJ* 5:220-221). An end, he continues, is a representation of an effect, but one that is the "determining ground of its cause, and precedes the latter" (*CPJ* 5:221). Form this perspective, Kant's definition of an end and purposiveness bear a striking affinity with his definition of life more generally. Life simply is the capacity of a being to precipitate its actions in accordance with a representation.

when he writes, "The human has sense to perceive, understanding to think, and a will to choose or reject. If he had nothing more than a sensitive faculty and desiring, he would be like a sensitive plant or a mollusk" (*Letters* 16:7). And in the pre-Critical essay *The false subtlety of the four syllogistic figures*, Kant states that non-human animals may lack the powers requisite for *logically* differentiating between two things, but are capable of *physically* differentiating between two things, which means they may be "driven to different actions by different representations" (*False* 2:60). For instance, Kant argues that a dog's sensations of a delectable roast placed alongside a loaf "are a ground of desire in the dog which differs from the desire caused by the loaf" (ibid). This is all to say that Kant typically thinks of animals and other lower life-forms as things that possess *some* faculty of representation. Moreover, it may be the case that, as the very last passage suggests, an animal's sub-rational representations ground a sub-rational (or irrational) desire to act in a particular way. Such passages may provide us with all the ammunition we need to contend that representations below the level of concepts and ideas can guide the living activity of non-human animals. Animals have a capacity to determine themselves in accordance with inner principles, where those inner principles a sensations and desires that do not rise to the level of concepts or cognitions.

1.4. Responding to the literature on life

Across the secondary literature, we encounter commentators and critics who employ one or several of the definitions of life sketched above. However, there are two vices reproduced in the literature on Kant's doctrine of life: Either commentators locate Kant's definition of life at the wrong level of the concept tree or commentators fail to relay the definition of life and its various divisions and subdivisions of life altogether. What we are left with is a body of literature that lacks

consensus on not only what Kant's fundamental definition of life should be, but on what the *sphaera* of the concept is.

Some commentators locate Kant's definition of life at Level 2 of *Figure 2*. Patrick Leland (2020) says that Kant understands organisms to be living things with a capacity for representation. Whereas some commentators distinguish organisms (e.g. humans and animals) from living beings without a capacity for representation (e.g. plants), Leland argues that all living beings are organisms, allowing that Kant granted lower life forms such as plants a capacity to represent. He takes Kant to be expressing this view straightforwardly when he says, "The capacity of a being to act according to its representations is called life" (*MM* 6:211). Leland sums up his view as follows:

> organisms are distinguished by their capacity for endogenously produced behavior; instincts are the mechanisms for the production of this behavior; and representations mediate the interface between instincts and external stimuli. On this view, the capacity for representation is said to be essential to the nature of a living thing because the behavior that distinguishes organisms from mechanically explicable products of nature is mediated by representations. (2020, 2)

Leland's view is instructive for a number of reasons. For one, he is correct to observe that Kant does intimately associate living with representing. Second, his view suggests that there are different kinds of organism, though it does not quite provide an adequate basis for distinguishing different kinds of organism from one another. Third, this view's emphasis on organisms' endogenous behavior points us in a fruitful direction. However, it is not entirely clear what it would mean to say that representation is essential to life. If, as we may suspect, Leland takes the inner principles determining a living being's activity to be representations, then he is mistaking a division of life for the definition of life. Besides Leland, in "Kant on plants" Tyke Nunez states that "for embodied beings to be alive is to have a faculty of representation, specifically desire, through which it can be the cause of the objects of its representations in the material world" (2021, p. 9). By indicating that desire is the means by which a living think "can be the cause of the objects

of its representations in the material world", Nunez is mistaking a subdivision of a division of life for the definition of life. Likewise, Alexandra Newton asserts that Kant's characterization of life as the faculty to act in accordance with the laws of desire from the *Critique of Practical Reason* is his most basic definition of life (Newton 2017).

Then, there are the entries on life from the various Kant lexica. All of these entries are even less committal than the views expressed in the secondary literature, often offering us fragments that could be incorporated into a complete concept tree for <life>, but stopping short of advancing a fundamental definition of expounding on the divisions beneath the concept. Howard Caygill's entry for "life" in his *Kant Dictionary* exemplifies this tendency:

> Kant's thoughts on life may be divided into three groups, all of which are found in the CJ. The first group is concerned with what might be described as the 'worth of life' and is exemplified by the footnote to CJ 83. The 'worth of life' measured in terms of enjoyment or happiness is 'less than nothing'; it only receives worth when lived in accordance with reason or 'with a view to an end so independent of nature that the very existence of nature itself can only be an end subject to the condition so imposed'. Alongside this view of the value of life Kant holds another, opposed but internally consistent position. This is summed up by the position from that 'of itself alone, the mind (*Gemüt*) is all life (the life principle itself), and its hindrance or furtherance has to be sought outside it, and yet in the human beings themselves, and consequently in connection with their bodies.' In this view, life is a complex relationship between the body, the outside world, and the mind [*Gemüt*]. This may be related to 1 of CJ where Kant relates the feeling of life possessed by a subject with the 'feeling of pleasure or displeasure', thus bring together life, the mind, and pleasure and pain. In the light of this concept of life, many of Kant's unremarked comments on 'life' in the first part of CJ take on considerable significance. In the third group, Kant considers life in terms of the 'organised products' of nature; it is in this context that he made the celebrated claim concerning the absurdity of the hope 'that maybe another Newton may some day arise, to make intelligible to us even the genesis of but a blade of grass from natural laws that no design has ordered' (CJ 75). (Caygill 1995, 278-9)

While Caygill's entry does accurately identify few aspects of Kant's notion of life, it also demonstrates what is lacking. Caygill is correct to point out Kant's relating the "feeling of life" to the feelings of pleasure and displeasure. Caygill is also correct to point out that Kant classifies the mind as the principle of life at various points throughout his lectures and writings, although he

sometimes also identifies this principle of life as "the soul." And Caygill astutely mentions Kant's most recognized characterization of a living thing as an organized product in this passage. That is, living things exhibit an ability to conduct themselves in an end-directed way, and this is showcased by their ability to reproduce, self-regulate, and self-preserve (see *CPJ* 5:370ff). Nevertheless, there are several matters that Caygill's entry does not even mention some of Kant's most straightforward definitions of life in his written work and lecture notes. As such, Caygill completely neglects discussion of the role of representation, desire, thought, purposiveness, will, and a number of other key faculties in Kant's doctrine of life. In a sense, Caygill does not even put forward a proposal for what Kant could mean by life.

The entry on life in the *Kant Lexikon* (2015) goes beyond Caygill's entry, providing much more information about what is included in Kant's definition of life. Still, this entry does not settle on one definition to prize above others. This entry explores the relationship between life and natural ends, life and the soul, and life and the faculty of desire. Moreover, it makes a number of striking claims and observations. The entry states that the soul and life are synonymous ideas to Kant (2015, 1376) and that life should be understood as a regulative concept of reason (2015, 1378). Also, noting that Kant associates life with the faculty of desire, the entry raises the question of whether such an association bodes well or poorly for the prospect of plant and animal life (2015, 1377). Overall, the entry contains a number of a provocative suggestions, but leaves the reader with more questions than answers. It is unclear what the most basic definition of life is and how the various species of the concept relate to it.

Karen Ng's entry for "Life" in the *Cambridge Kant Lexicon* associates Kant's notion of life with other important philosophical concepts of his and comes closest to offering a definition of life. Ng begins by highlighting Kant's definition of life as the "capacity to initiate a state (of oneself

or another) from an inner principle" (R3855. This definition seems to echo our most abstract definition of life, *Life 0*. Here, life is the capacity to act from some inner principle, and we can infer that this inner principle may, but need not, be represented, insofar as it is an inner. Ng rightly notes that this definition of life shares affinity with Kant's emphasis on spontaneity and internal purposiveness, even suggesting that this definition of life leads to Kant's definition of a "natural end" in the third *Critique*. Kant's critique of hylozoism is also recapitulated in this entry, leading Ng to conclude that the principle and force associated with life is an immaterial principle, an idea that perhaps echoes the claim that soul and life are synonymous from the *Lexikon* entry (2021, 277). Crucially, Ng emphasizes that the only means of acquainting oneself with this life force is through the regulative use of a concept deployed in the form of a reflective judgment (see *CPJ* 5:375). Lastly, Ng's entry reports a number of fascinating remarks about the relationship between life, pleasure, and pain, as well as a few about love of life as a natural impulse. As is the case with entries in other lexica, Ng's entry offers us tantalizing bits, but does not quite commit to a single, central definition of life.

The deficits in the secondary literature correspond to obstacles in the way of a unified doctrine of life. Kant's remarks on life are scattered and at times inconsistent. The secondary literature reflects the scattered and conflicting nature of Kant's remarks but often stops short of attempting to impose order on the chaos. When a commentator does attempt to impose order, they opt for one of the definitions offered in the first subsection without entertaining any of the other candidate definitions or arguing why the definition of life they choose is more plausible than any other. In short, the literature sometimes leaves the question of what Kant's definition of life is underexplored or acknowledges Kant's inconsistencies and vagueness on this point without attempting to advance a central definition of life.

If we keep in mind that Kant's definition of life only specifies that it is the capacity of a thing to act in accordance with principles internal to it and hold out powers of representation, desire, and so forth as elements that are only introduced within divisions of the concept, these confusions dissipate. Life is defined at Level 1. Levels 2 and 3 only pick out various kinds of life and should therefore only be predicated of certain kinds of living being.

2. What is the inner principle of life?

So far, I have argued that something is an organism only if it is alive. To be alive is to possess a faculty to determine oneself in accordance with inner principles. Until now, I have settled for a merely negative appraisal of what inner principles – that is, they are not external principles, or states of matter that temporally precede and being about an alteration in another material substance, inducing either motion or rest. In some cases, we have seen that these inner principles can be concepts, representations, and even feelings. But what do all of these have in common that makes them inner principles? Furthermore, insofar as our conceptual analysis of life allows for the possibility that there are non- or sub-representational forms of life, how could our account of an inner principle reflect this feature of the concept?

I argue that we should read the inner principles of the faculty of life as *values*. For reasons that will become clearer below, we should also interpret this notion of value as amoral. For instance, someone can consider robbing a bank as a good for them, even if stealing is never (in some thicker, more loaded sense of the term) good. The reading I develop here makes Kant a forerunner of a somewhat recent trend in the literature on life and the organism.[33] This trend characterizes the living activity of (at least certain) organisms as a functional unity that is explained

[33] See Bedau 1992, Shields 2011, and Shields 2017.

by and in terms of values. I shall first explain Mark Bedau's distinction between three grades of teleology before turning to the evidence for applying this distinction to Kant. For Kant, I believe that this evaluative conception of the teleology of living things is most readily applicable to the human being and to artifacts. For that reason, our analysis will begin by applying the evaluative account to the task of analyzing these two cases. We will then consider how far down the chain of living organic activity we can descend.

In his 1992 "Where's the good in teleology?", Mark Bedau distinguishes between three grades of teleology, thereby clarifying what the controversy regarding teleology in biology really concerns. All three grades ascribe value to some activity, but only the highest grade deems value genuinely explanatory. The first grade is formulated in the following way:

[G1] A Bs in order to C *iff* A Bs and A's Bing contributes to Cing and Cing is good for A.

According to G1, a teleological explanation of some thing mentions that its activity contributes to some end and conjoins the claim that the end is valuable to that explanation. For instance, we say that Amalia powerlifts in order to get stronger. In our explanation of the relationship between powerlifting and getting stronger, we note that powerlifting does indeed augment one's strength and that having strength is good for Amalia. However, Amalia's powerlifting, on G1, merely performs the function of making her stronger, and any benefits that becoming stronger may have for her is merely accidental. Increased strength being good Amalia is merely accidental in this case, not genuinely explanatory of why she powerlifts.

For the sake of screening off accidental benefits, Bedau introduces a slightly stronger version of G1:

[G2] A Bs in order to C *iff* [A Bs because A's Bing contributes to Cing] and Cing is good.

The bracket around the "A Bs because A's being contributes to Cing" is meant to specify that, in the case of G2, the explanation for A's Bing still does not depend on the goodness of Cing. Amalia powerlifts *because* she wants to get stronger, but the benefits of her increased strength are still not, for whatever reason, why she chooses to powerlift.

Only the third grade of teleology captures what it means for a value to be genuinely explanatory.

[G3] A Bs in order to C *iff* A Bs because [A's Bing contributes to Cing and Cing is good].

According to G3, Amalia powerlifts because she wants to get stronger *and* because she recognizes that getting stronger is good for her. One way of conceiving of this decision procedure is to think of it as something reminiscent to a practical syllogism (see Bedau 1992, section 4):

1. Getting stronger is good for you.
2. Amalia's powerlifting is a means to getting stronger.
3. Therefore, Amalia powerlifts.

Of course, as Bedau acknowledges, this is an invalid argument. So he adds that "One could fill this gap by appealing to a background theory about naturalistic *telic mechanisms*, which have the ability to convert the value of an end into an efficient cause of a means to that end. Given an appropriate theory about telic mechanisms, the premises of the argument above would be sufficient to guarantee the truth of the conclusion" (1992, 795). One such telic mechanism is a mind. Adapted to the activity of a mental agent, G3 should be modified as follows:

> [G3.1] A Bs in order to C *iff* A Bs because A believes the following telic structure: [A's Bing is a means to Cing & Cing is good].

If I quit drinking coffee in order to get better sleep, I believe that quitting coffee is a means of bringing about better sleep and getting better quality sleep is good for me. But, in accordance with

the amoral account of value Bedau develops, the good of a mental agent does not have to be a genuine good. I could, for instance, increase my caffeine intake in order to be more productive, believing that a higher caffeine intake is a means to productivity and that greater productivity is good for me. However, this course of action is certainly not good for my health in the long run, and it is certainly not the case that increased productivity at the expense of one's health is a genuinely good thing.

Another modified version of G3 explains artifacts.

[G3.3] A Bs in order to C *iff* A Bs because D made A B in order to C.

An oven warms up in order to cook pizza because I made the oven so that it could warm up and cook me pizzas. In this case, pizzas are of value to me, the designer of the oven. That value not only guides my design of the oven, but also gives me a measure for figuring out whether the oven is working or not. The oven is in top shape as long as it can cook me pizzas in a timely fashion; the oven is broken if it cannot serve the purpose of making me pizza. Notice, however, that my assessment of whether or not this is a good oven depends on what is valuable to me, the artificer and user of the oven.

One final idea from Bedau's paper is worth mentioning here. To him, the controversy about teleology in biology has to do with grade three teleology. Most biologists find it perfectly fine to believe that there could be grade two forms of teleological explanation in biology.

> Since survival is good (indeed, the paramount good) for forms of life, the scope difference between grade two and grade three comes into play when natural selection operates over living populations. The scope difference concerns whether the goodness of survival plays an essential role *within* the natural selection explanation (grade three), or whether the goodness of survival is merely *conjoined* to the explanation (grade two). (Bedau 1992, 801)

Biologists worry that attributing grade three teleology to all organisms would require an appeal to deism, and modern biology has no place for a deity. On top of that, many believe that teleology in

biology requires a single global purpose that harmonizes all local purposes, but the fact of the matter is that there is vicious competition in the observable biological world. And lastly biologists worry that grade three teleology appeals to *ad hoc* theoretical posits, like vital forces. For reasons I will forego spelling out here, Bedau thinks it is not out of the question that grade three teleology may exist in the biological world after all (see 1992, section 10). What matters most is that grade three teleology is what biologists find controversial. In addition, grade three teleology is what seems most consonant with Kant's depiction of life as a substance's faculty of determining itself in accordance with an inner principle.

Kant's various characterizations of the life of the human being seem to involve grade three teleology. A human being's life has desires as its grounds and produces activities like willing, thinking, and feeling pleasure. Suppose I have a *desire* to make my niece happy. On the basis of my desire, I may buy my niece a birthday present and take her to the zoo. Notice that activity in accordance with a desire in this context can be easily transposed into a Bedau-style analysis. Indeed, such an analysis may shed more light on why I adopt the course of action that I adopted. I buy my niece a nice birthday present and take to the zoo in order to make her happy, where I believe that the activities of buying her a nice present and taking her to the zoo contribute to her happiness and that making her happy is a good thing (hence my desire for it). Such an analysis of Kant's notion of human life presupposes that we value that which we desire. This is strikingly concordant with some of Kant's remarks on desire in his lectures on psychology:

> The faculty of pleasure and displeasure was the relation of the object to our feeling of activity, either of the promotion or of the obstruction of life. But insofar as the faculty of pleasure and displeasure is a faculty of certain activities and actions which are suitable to it, to that extent there is a *desire*. Desire is thus *a pleasure insofar as it is a ground of an activity for determining certain representations of the object*. If the representation is a ground for determining us for the object, then we *desire* the object. Dissatisfaction in an object, insofar as it can be the cause of a representation, is *abhorrence*. (*LM* 28:253-4)

> …we can desire or abhor nothing which is not based on pleasure or displeasure. For that which gives me no pleasure, I also do not want. (*LM* 29:877-8)

> I desire nothing but what pleases, and avoid nothing but what displeases. (*LM* 29:894)

In these passages, we encounter a deep connection between the desires that impel living activity and their pleasurableness. In every case, I act on the basis of desires and desire only what I find pleasurable. While the invocation of pleasure as a source of or a feeling that tracks desire might seem to make Kant's theory of desire shallow, it is worth noting here that pleasure seems to track something deeper than just a bodily sensation. Appropriately, Kant repeatedly asserts that there are sensible pleasures and intellectual pleasures. For instance, "The pleasant and the beautiful is a sensible pleasure, but the good an intellectual pleasure" (*LM* 28:587). Pleasure is induced by a wide range of phenomena and in a wide range of ways. What also stands out is Kant's insistence that pleasure tracks the attainment of or failure to attain our desires:

> Pleasure is the *representation of the agreement of an object or of an action with* subjective *conditions of life*. (*CPrR* 5:9n)

> Pleasure and displeasure is thus a faculty of the agreement or of the conflict of the principle of life with respect to certain representations or impressions of objects. (*LM* 28:247).

In these contexts, pleasure results from bringing about our desires and therefore successfully bringing the "principle of life" into fruition. Displeasure results from feeling thwarted in our lived pursuits.

Putting all of these elements of Kant's psychology together, I propose that we think of life as the capacity to act in accordance with what we find valuable. My desires are predicated on what brings about pleasure, as Kant says above, and what I find pleasurable is simply that which has value to me. Those values can be wide-ranging, just as my pleasures could be. I could find an ice-cold coffee on a hot morning pleasurable. On that basis, I might drink an ice-cold coffee on a hot morning in order to feel this pleasure. In this case, the value of that feeling genuinely explains why

I decided to make the iced coffee on a hot morning. But a human may also have rational interests and derive a certain pleasure from pursuing those. For instance, a philosopher presumably (read: hopefully) desires truth. So, a philosopher may write a treatise in order to get at the truth of some issue. In this case, the philosopher has a belief that their writing a treatise will contribute to their discovering the truth and that attaining the truth is (perhaps the one unconditional) good. Their desire for the truth is something they find valuable, and in this case we once again find that this value is driving and actively structuring the composition of the treatise.

At this point, I hope to have shown that it is plausible to think Kant's account of the activity of a living human being is consistent with the evaluative conception of teleology developed by Bedau. We may also wonder whether this conception of life as a value-driven and value-directed activity can suit subhuman lifeforms, as well. The textual evidence may support this. As we saw above, Kant forcefully maintains that non-human animals are not mere machines. In some cases, he even attributes a power of choice to animals and states that they have an ability to act on the basis of their choices. Furthermore, Kant frequently distinguishes between higher and lower faculties of desire in his *Lectures on Metaphysics* (see, e.g., *LM* 28:228-9). If desires are the name for the values that serve as the inner principles of living activity for Kant, the fact that non-human animals possess, at the very least, a lower faculty of desire may be enough to establish that an animal can have and act in accordance with certain values. A bird brings its offspring food because it believes (in some primitive way) that giving its offspring food will contribute to its survival and it values the survival of its offspring. All that we would need to make sense of the fact that an animal has values and acts in accordance with those values is to attribute a primitive mind to it. Kant seems rather comfortable doing that throughout his writings and lectures.

Things get more complicated with lifeforms that are lower on the chain of organic being. Notwithstanding an odd remark about "sensitive plants," Kant does admit that "there are also various small degrees of life" in the plant kingdom (*LM* 28:205). If life is just a faculty to act in accordance with inner principles, where those inner principles are the living thing's *values*, it would appear to follow that a plant could act in accordance with its values to some "small degree." Moreover, if the concept of life does not exclude the possibility that these inner principles are non-representational, we may not need to attribute even a primitive mind to the plant. Perhaps it is possible to say that, in some minimal and to us inaccessible way, a tree values its growth, self-maintenance, and so forth. When we say that it has life, we understand the tree as the kind of thing that organizes itself in accordance with these values, its roots, branches, leaves, etc. structured as both means and ends for each other precisely because such a configuration contributes to the realization of what we might call "tree values" – e.g., reproduction, self-maintenance, and so forth.

3. Conclusion

The internal-principle-grounded activity of an organism presupposes a capacity for exercising such an activity. For Kant, this capacity is life. As we also saw above, we can conceive of various sense of life. Most generically, though, life is the capacity of a substance to act in accordance with inner principles. While the literature has mistaken a species of life to be the core definition of the concept, my analysis helps to clarify that the most generic definition of life need not involve any sort of representation at all. I have also shown that Kant's conception of living activity is strikingly consonant with a recent trend in the philosophy of life, which takes living activity out to be teleological in the sense that it involves and is explained in terms of the values of the living thing.

When I turn my attention to Kant's daunting Antinomy of the Teleological Power of Judgment, we shall see that the account of the organism and life developed in this chapter provide us with a new way of understanding Kant's claim that organisms are mechanically inexplicable.

PART II

Chapter 4. Are there organisms in nature?

One conclusion we should take away from Part I is that the very concept of nature does not prevent us from thinking of nature and natural products as governed by mechanism *and* as organized teleologically. We can conceive of a natural object both as a machine driven by external causes and as a living organism driven by internal causes. Despite this, we should wonder whether and how the concepts of mechanism and teleology extend to nature and natural objects. To be able to think organisms is one thing. However, a significant question remains unanswered: Are there *really* organisms in nature? If we can establish that there are organisms in nature, then we can establish that at least some forms of non-mechanistic causality are indeed present in nature.

Before even evaluating what Kant says, common sense suggests that the answer to this question is, "Of course there are organisms in nature." There are cats, plumeria plants, human beings, beetles, and all sorts of other lifeforms all over the planet. They vary in shape, size, complexity, and across many other dimensions, but we can definitively say that the entities we call organisms are fundamentally different from rocks, cars, lamps, and "autonomous" vacuums. For this reason, too, we might scoff at philosophies and philosophers that reject the rather obvious assertion that there are organisms. Descartes's view that animals do not possess intelligence and are therefore mere machines might provoke a cringe because it represents an affront to the commonsense view.[34] One might (justifiably) feel a certain sense of unease when faced with the claim that dogs are no different from clocks.

So, does Kant's Critical thought on the organism present us with a view that aligns with "common sense" or one that is closer to Descartes's? Recent scholarship puts forward a reading of Kant that makes him out to be a Cartesian in this sense. Commentators have typically thought that

[34] See, notably, Descartes's remarks on "beasts" in Part Five of the *Discourse on Method*.

there is considerable evidence in favor of attributing to Kant the view that nature is mechanistic and that all natural objects are nothing more than machines – or the mechanistic reading of nature, as I have called it above. To them, the evidence overwhelmingly shows that we can determinately judge that nature and natural objects are mechanistic.[35] Those same commentators often note that judgments which explain nature and natural objects teleologically are not so readily evidenced by nature. According to the consensus view, while it makes sense to determinately judge that certain objects are organized in accordance with mechanism, judging that a thing is a teleologically-structured organism is something we do merely reflectively. Whereas we can prove that mechanism applies to objects, we only *reflect* upon nature *as if* it's teleologically structured. We should read this "as if" claim as describing an act of mental projection that is either a mere fiction or descriptive of a state of affairs that may or may not obtain in nature. In other words, organisms are either convenient fictions or mere theoretical posits that we can never truly say exist. Phrased as a response to the titular question, these commentators have two responses. Some say, on Kant's behalf, "There are no organisms in nature" point blank; others say "There may or may not be organisms in nature" giving both possibilities equal weight.

In this chapter, I frame my forthcoming reading of the Antinomy of the Power of Teleological Judgment by presenting and analyzing these popular answers to the question "Are there organisms in nature?". I first show that commentators are right to point out that Kant believes there is direct evidence for attributing mechanism to nature. However, he never quite explicitly states that we definitively establish that all products of nature are mere machines and that there could never be organisms. It makes sense that Kant never states these claims explicitly, for, as I show, Kant's text contains evidence that nature and some natural objects are organized purposively.

[35] See sections 1 and 2 of the Introduction and section 2 of Chapter 6.

I finally discuss the difference between determining and reflecting judgment to add that, while we merely reflectively judge that natural products are teleological, we need not deny or resort to skepticism about the existence of organisms. Surely, we can never *empirically cognize* the causality characteristic of an organism, but this does not foreclose every path to establishing the existence of organisms. All of this shall set us up for appreciating my original answer to the main question up for discussion – namely, for Kant, there are organisms in nature, and our assent to this proposition is a matter of belief.

1. Evidence for the mechanism of nature

Before discussing the possibility that there are organisms, we must acknowledge that there are many natural objects which are thoroughly explained and dictated by the Laws of Mechanics. There is good reason to believe that a mechanistic understanding of nature should have special priority in Kant's philosophy. In the *Metaphysical Foundations of Natural Science*, the scope of the Laws of Mechanics extends to all material things. The First Law of Mechanics scopes over "all changes of corporeal nature" (*MFNS* 4:541), the Second Law applies to "every change in matter" (*MFNS* 4:543), and the Third Law to "all communication of motion" in matter (*MFNS* 4:544). If we think of the "mechanism of nature" as all of nature insofar as it is governed by the Laws of Mechanics and find that, everywhere we turn, we can explain the changes material objects undergo in terms of mechanism, that seems like compelling evidence for the claim that we can determine nature is thoroughly mechanistic. As Kant states in the body of the *Critique of the Power of Judgment*, "It might always be possible that in, e.g., an animal body, many parts could be conceived as consequences of merely mechanical laws" (*CPJ* 5:377). An animal body counts as just one kind of natural object presented to us in outer sense. Since the Laws of Mechanics apply to *all* objects

presented to us in space and time, we might also infer that it might always be possible that, for any material body presented to us in outer sense, its parts can be conceived of as possible as consequences of merely mechanical laws. In short, physics is a (perhaps the) true natural science in the sense that it describes the composition of and interactions among all material bodies in accordance with universal and necessary laws. To the extent that mechanism describes this physical picture of nature, it provides an objectively valid picture of nature.

Kant directly endorses the idea that we should strive to explain nature mechanistically as far as we possibly can all throughout the third *Critique*: "We can and should be concerned to investigate nature, so far as lies within our capacity, in experience, in its causal connection in accordance with merely mechanical laws: for in these lie the true physical grounds of explanation, the interconnection of which constitutes scientific cognition of nature through reason" (*CPJ* 20:235). Passages like these seem cut-and-dry. "Merely mechanical laws" are the "true physical grounds of explanation." Insofar as we can apply these laws to nature, we gain further insight into its physical composition and make strides in our natural science. Everywhere we search, we find that nature can be dissected and analyzed in mechanistic terms. Evidence for the claim that nature is governed by mechanistic laws is plentiful.

2. Evidence for the teleology of nature

Though there is plenty of evidence supporting the notion that we should seek to extend our mechanistic explanations of nature as far as possible, two considerations prevent us from conclusively affirming that nature is all and only mechanism. The first consideration is negative. Kant frequently asserts that mechanism is never adequate for explaining all of nature and the

objects in it on its own.[36] The second consideration is positive. In passages often neglected by commentators, Kant maintains that there is evidence of purposiveness in nature.

Kant never explicitly endorses the notion that the principles of mechanism are constitutive of nature as such, and even before the beginning of the Antinomy of the Teleological Power of Judgment, he asserts that mechanism on its own cannot exhaustively explain the generation of nature and natural products. In the opening section of the *Critique of the Teleological Power of Judgment*, Kant states that the organization of certain natural products cannot be explained by appeal to efficient causes alone. The contingent structure of a bird would remain unexplained if we considered the bird merely a product of mechanism: "considered as a mere mechanism, [it] could have formed itself in a thousand different ways" (*CPJ* 5:360). To explain the structure of a bird, we need to appeal to a nexus of final causes, and the need to invoke such a principle in our explanations of certain natural products indicates that, in certain cases, "the laws of causality about the mere mechanism of nature do not suffice" (ibid). Likewise, in §64, Kant adds that the growth of a plant occurs "with a quality peculiar to its species, which could not be provided by the mechanism of nature outside it" (*CPJ* 5:371). In general, the motion of a thing we take to be an organized being displays a "self-propagating formative power" that cannot be reduced to mechanism (*CPJ* 5:375).

It is not just the case that alternative teleological forms of explanation are appropriate in certain cases; Kant often puts forward the stronger claim that we *must* abandon mechanical explanations in some situations. For instance, he holds that "the power of judgment first makes it possible, indeed necessary, to conceive in nature, over and above its mechanical necessity, a

[36] For a complementary illuminating discussion of this point, see Angela Breitenbach's "Laws in Biology and the Unity of Nature" (2017).

purposiveness" (*CPJ* 20:219). Kant later explains that this necessity arises because, although we "can and should" investigate nature in accordance with merely mechanical laws,

> we find among the products of nature special and very widely distributed genera, which contain within themselves a combination of efficient causes that we must ground in the concept of an end, even if we wish to employ only experience, i.e., observation in accordance with a principle suitable to their inner possibility. If we wished to judge their form and its possibility merely in accordance with mechanical laws, in which the idea of the effect must not be taken as the ground of the possibility of their cause, but vice versa, then it would be impossible to obtain even one experiential concept of the specific form of these natural things which would put us in the position to move from their inner disposition as cause to the effect, since the parts of these machines, not insofar as each has a separate ground of its possibility but rather only insofar as all together have a common ground, are the cause of the effect that is visible in them. (*CPJ* 20:235)

This passage follows Kant's statement regarding the possibility of explaining nature mechanistically referenced in the previous section. On its own, that passage appeared to support the notion that nature can and should be explained in accordance with mere mechanical laws. Yet here Kant adds that in our investigations of nature, we come across natural products the form of which we cannot explain in simply mechanistic terms. "Physical-mechanical causes", as Kant goes on to call them (*CPJ* 20:236), are insufficient in our attempt to account for the purposive structures we happen upon in nature. Kant further illustrates what he means here by invoking the example of a human eye. We cannot exhaustively explain the form and organization of the human eye in merely mechanistic terms. We might think that explaining why the eye is structured as it is necessitates purposiveness. An eye is structured in the way that it is *in order to* be used for seeing. The purpose of seeing conditions or explains the contingent structure and activity of the eye (see *CPJ* 20:240), and this purpose is clearly not a physical-mechanical cause.

Later, my reading of the Antinomy of the Teleological Power of Judgment will add reinforcement to the points sketched above. In the Antinomy, Kant *never* declares that mechanism will one day *exhaustively* explain nature and actually stops short of saying that the principle of

mechanism should be considered constitutive of nature.[37] Furthermore, we shall see that Kant consistently maintains that mechanism will *never* provide an exhaustive explanation of nature. Though we should always apply the principle of mechanism as we possibly can, occasions for suspending this principle are always bound to arise.

But besides the notion that there are appropriate times to suspend mechanistic explanation, Kant straightforwardly asserts that nature and experience present instances of internal purposiveness to us. Of course, these presentations never rise to the level of empirical cognition. Still, consider the following passages, which we will retread regularly throughout the remainder of the dissertation: "Experience leads our power of judgment to the concept" of a natural end (*CPJ* 5:366) and the principle stating that an organized product of nature is a natural end is "derived from experience, that is, experience of the kind that is methodically undertaken and is called observation" (*CPJ* 5:376); whereas the "cause of the possibility of a natural end", i.e., an intelligent author of nature, is merely an idea of reason, "the consequence that answers to it (the product) *is still given in nature*" (*CPJ* 5:405); "purposive unity is still so important a condition of the application of reason to nature that I cannot pass it by, especially since experience liberally supplies examples of it" (A826/B854); and as the question of how organisms arise in the first place is one that reason compels us to pose, it is *necessary* for us to "conceive of a particular kind of causality for it that is not, unlike the mechanism of natural causes, found in nature" (*CPJ* 5:411). Kant does not stop here, maintaining, "for things we once acknowledge [*anerkennen*] as natural ends" (*CPJ* 5:415), mechanically causal explanations will *never* suffice as a full account of their generation and activity. And even in the "General Remark on the Teleology", which follows the conclusion of the main text of the Methodology, Kant reminds us that the very concept of ends of nature is

[37] For more on these points, refer to section 1 of Chapter 5 directly below.

given to us "only through experience" (*CPJ* 5:476). We find this sentiment repeated in the proof for the immortality of the soul in *Metaphysik L₂*, when Kant states the following the premise: "We find in nature a connection of efficient causes, also connection of ends, this connection is indicated in organized beings, and the connection of finality <*nexus finalis*> with living beings is the highest principle, from which we cannot depart at all" (*CPJ* 28:592). The principle that we derive from the connection of ends we "find" in nature is that every organ of a living thing serves a purpose. From this, Kant says, we can infer that no organ or faculty of the human being is purposeless. Since some faculties set tasks for the human being that cannot be completed in one lifetime, there must be a future life. The fact that we *find* this connection ends in nature and that it is "indicated in organized beings" is an indispensable first step of this proof.

So, there is not only reason to deny the claim that mechanism can exhaustively explain nature. There are also grounds for positively affirming that we find purposively organized things in nature. At this point, someone might insist that teleological judgments are *reflecting* judgments based on *regulative* principles. This status makes such judgments merely subjective. In all of the passages above Kant is confused – he really should be saying that we sometimes pretend that nature is purposive or merely project that purposiveness onto nature for the sake of formulating and organizing judgments. Since reflecting judgments do not refer to any objects in nature and we attribute purposiveness to things on the basis of reflecting judgments, the attribution of purposiveness to natural objects is a game of pretend or a heuristically useful figment of the imagination. Let us turn to an analysis of the difference between determining and reflecting judgments to see if the text compels us to view teleological reflecting judgments in this light.

3. The power of judgment and regulative principles

In this section, I consider Kant's canonical definitions of determining judgment and reflecting judgment, then discuss the role of regulative principles throughout the Critical philosophy, placing a special emphasis on their role with respect to teleological reflecting judgments. Kant formally introduces us to the power of judgment as a "faculty for the subsumption of the particular under the general" that "mediates the connection" between reason and understanding with its "own special principles" (*CPJ* 20:201-2). In order to establish that the power of judgment is its own special faculty, we have to assume "the concept of a purposiveness of nature in behalf of our faculty for cognizing it, insofar as for this it is required that we be able to judge the particular as contained under the general and subsume it under the concept of nature" (*CPJ* 20:202-3). Our faculty for judging the purposiveness of nature – i.e., our power of judgment – only gains traction if we first make the assumption that nature is structured purposively, or is a systematic whole rather than a merely scattered, disorganized aggregate. It is only by this means that we can ensure "the purposiveness or fitness of nature to our power of judgment", representing nature "as technical" and using the "subjective principles" resulting from this assumption as guidelines for our actual investigations of nature (*CPJ* 20:204n). The power of judgment branches off into two species: determining judgment and reflecting judgment. Determining judgments are grounded in given concepts of the understanding as their constitutive principles, and this makes it possible for us to establish the objective reality of these concepts and empirically cognize the object of our judgment (Section 3.1). Reflecting judgments are based on regulative principles or concepts, and we can never establish the objective reality of such principles or concepts, nor can we empirically cognize the objects pertaining to these principles or concepts (Section 3.2). This has prompted readers of Kant to assert that regulative principles or concepts correspond to mere

fictions or mental projections. Below, I simply sketch the arguments motivating this popular interpretation of Kant (Sections 3.3 and 3.4). The goal of subsequent chapters is to motivate the possibility of an alternative reading, one that promotes a belief in the existence of the organism.

3.1. Determining judgments

Determining judgments proceed from universal to particular and are based on constitutive principles. What it means to say that these judgments proceed from universal to particular can be illustrated by analyzing a classic example of a determining judgment. In the *Critique of Pure Reason*, a pure concept of the understanding is described as a "function that gives unity to the different representations **in a judgment**" as well as to the "mere synthesis of representations **in an intuition**" (A79/B104-5). In other words, a universal *a priori* concept of the understanding brings unity to a particular given in intuition. An example Kant gives is the judgment "All bodies are divisible." In this judgment, "the concept of the divisible is related to various other concepts; among these however, it is here particularly related to the concept of body, and this in turn is related to certain appearances that come before us" (A68/B93). The concept <divisible> is a universal predicate that can be attributed to any number of bodies, and when we employ this concept in a judgment that attributes that predicate to a particular material body that appears to us, we make a determining judgment. This is a determining judgment because it presupposes an *a priori* universal concept of divisibility and subsumes an intuited particular under that universal category.

The principles that structure a determining judgment are constitutive. What Kant seems to mean when he uses the label "constitutive" to describe these principles is that they serve to constitute *experience*. Recall that experience, or empirical cognition, is just that mental state that arises as a result of subsuming a given intuition under a concept of the understanding (see A50/B74ff). Such a characterization makes sense of the fact that Kant thinks of the categories of

the understanding as "constitutive concepts": "concept of purposiveness is not a constitutive concept of experience at all, not a determination of an appearance belonging to an empirical **concept** of the object; for it is not a category" (*CPJ* 20:219-22). The categories of the understanding are necessary *a priori* conditions for the possibility of experience or empirical cognition. This makes the categories principles that are *constitutive* of experience.

Determining judgments begin with a universal concept and proceed by subsuming a particular given intuition under that concept. A prime example of principles or concepts presupposed by a determining judgment are just the categories of the understanding. As Kant puts it when he's first contrasting reflecting with determining, "The power of judgment can be regarded either as a mere faculty for **reflecting** on a given representation, in accordance with a certain principle, for the sake of a concept that is thereby made possible, or as a faculty for **determining** an underlying concept through a given **empirical** representation" (*CPJ* 20:211). Determining judgments fundamentally involve a concept of the understanding and a given intuition subsumed under such a concept, and the principles of determining judgments are necessary for (i.e., constitutive of) empirical cognition. As Kant puts it,

> Every determining judgment is logical because its predicate is a given objective concept. A merely reflecting judgment about a given individual object, however, can be aesthetic if (before its comparison with others is seen), the power of judgment, which has no concept ready for the given intuition, holds the imagination (merely in the apprehension of the object) together with the understanding (in the presentation of a concept in general) and perceives a relation of the two faculties of cognition which constitutes the subjective, merely sensitive condition of the objective use of the power of judgment in general (namely the agreement of those two faculties with each other). (*CPJ* 20: 223-4)

While determining judgments begin with a "given objective concept," or a concept the objective reality of which can be proven in an experience, a reflecting judgment "has no concept ready for the given intuition." Instead, as the case of an aesthetic reflecting judgment illustrates, a reflecting judgment begins with a given particular intuition and then proceeds by seeking out a concept for

that intuition. Reflecting judgments consists of parts similar to those of their determining counterparts, but have an inverted structure. The principles of reflecting judgment are accordingly quite different from those of determining judgment.

3.2. Reflecting judgment and its principle

Unlike determining judgments, reflecting judgments proceed from particular to universal and are based on *regulative* principles. In the First Introduction to the *Critique of the Power of Judgment*, Kant writes, "**To reflect** (to consider), however, is to compare and to hold together given representations either with others or with one's faculty of cognition, in relation to a concept thereby made possible" (*CPJ* 20:211). Reflecting judgment, which no doubt counts as an instance or a species of reflection, involves the comparison and holding together of given representations.[38] However, the given representations cannot be concepts, for it is only in the process of comparing and holding together these representations that a concept to which they are related becomes possible. The particular comes first in reflection; the universal concept comes second. Following this definition, the text continues, "**Reflecting** (which goes on even in animals, although only instinctively, namely not in relation to a concept which is thereby to be attained but rather in relation to some inclination which is thereby to be determined) in our case requires a principle just as much as does determining, in which the underlying concept of the object prescribes the rule to the power of judgment and thus plays the role of the principle" (*CPJ* 20:211). All powers of judgment presuppose a principle. While the constitutive principles of the understanding serve to ground determining judgments and make experience, or empirical cognition, possible, the structure

[38] Kant's verbiage in the definition suggests that reflection is an activity more generic than reflecting judgment. There can, in other words, be forms of reflection not undertaken in a reflecting judgment. Here, I want to follow Kant's proclamation that reflecting judgment tracks one principle-oriented function of the power of judgment. My remarks on reflecting judgment and its principles should not be taken to apply to reflection as such.

of reflection requires us to find a different sort of principle, one that does not automatically lead to empirical cognition.

The principle of reflecting judgment takes the following form in the First Introduction: "The principle of reflection on given objects of nature is that for all things in nature empirically determinate **concepts** can be found, which is to say the same as that in all of its products one can always presuppose a form that is possible for general laws cognizable by us" (*CPJ* 20:211-12). Without such a presupposition, "reflection would become arbitrary and blind" and we would have no guarantee that our reflections agree with nature in any way (*CPJ* 20:212). To be sure, such a principle does not ground or culminate in empirical cognition. Only the constitutive principles of determining judgment can produce such a state. Still, the principle of reflection serves to guide or regulate our investigations of nature.

These passages teach us a few things. For one, reflection and reflecting judgment are not merely subjective if we characterize their mere subjectivity as having only to do with mental acts and their organization. Rather, reflection occurs in response to "given representations." Moreover, reflection is not radically subjective in the sense that there is some expectation that reflection should *agree with* nature, as it's necessary to "presuppose" the principle that, for all "given objects of nature", we can find an empirical concept that explains their form. As Kant later adds, "Thus the power of judgment itself makes the **technique of nature** into the principle of its reflection *a priori*, without however being able to explain this or determine it more precisely or having for this end an objective determining ground for the general concepts of nature (from a cognition of things in themselves), but only in order to be able to reflect in accordance with its own subjective law, in accordance with its need, but at the same time in accord with laws of nature in general." (*CPJ* 20:214). In order for our reflections on certain natural products to make sense and to agree with

nature, the power of judgment requires us to presuppose the "**technique of nature**." Though we can never empirically prove that nature has such a technique, the power of judgment requires us to presuppose that nature is purposive. Reflection is blind, arbitrary, and cannot even get started without such a presupposition.

The question therefore becomes, What exactly is the epistemic status of such a presupposition? It does not seem as though we can empirically cognize, know, or definitively prove the existence of the objects of such an assumption. Kant clarifies that the principle of purposiveness is "regulative" (*CPJ* 5:168; 5:197). We presuppose that nature has a "technique," or is organized in accordance with purposes, and thereby make possible teleological reflecting judgments, which attribute an objective, inner, and material purposiveness to certain natural products, possible. In the *Critique of the Teleological Power of Judgment*, Kant further specifies that "The concept of a thing as in itself a natural end is therefore not a constitutive concept of the understanding or of reason, but it can still be a regulative concept for the reflecting power of judgment, for guiding research into objects of this kind and thinking over their highest ground in accordance with a remote analogy with our own causality in accordance with ends; not, of course, for the sake of knowledge of nature or of its original ground, but rather for the sake of the very same practical faculty of reason in us in analogy with which we consider the cause of that purposiveness" (*CPJ* 5:375). Here, it is significant that Kant refers to the very concept of "a thing as in itself a natural end" as a "regulative concept for the reflecting power of judgment." If the regulative principles of any power of judgment are just those principles which we presuppose for the sake of formulating a reflecting judgment upon a given representation that is not blind or arbitrary but potentially agrees with nature, the concept of a thing in itself as a natural end is just that kind of a

presupposition with respect to teleological judgments. Such a concept guides our research though it never culminates in "knowledge of nature or of its original ground."

One major goal of the remainder of the dissertation is to investigate what it means to say that the concept of an organism ("the concept of a thing as in itself a natural end") is regulative for the reflecting power of judgment. Clearly, this concept is never going to ground a determining judgment and therefore it will neither result in empirical cognition nor knowledge of any object or any property of an object. Still, as we saw previously, there is some expectation that reflecting judgments take up given representations and judge them in a way that is not blind and arbitrary, but somehow agrees with nature. As such, we may suspect that the concept of an organism regulates an act of reflection that meets these criteria.

However, commentators frequently argue that *all* regulative concepts and principles – including those that regulate teleological reflection – do not refer to anything that exists, serving a merely heuristic purpose.[39] These concepts are mere convenient fictions. In more optimistic moods, these commentators are totally non-comital about the existence of these objects' referents. In both cases, the moves commentators rely upon are similar – such regulative concepts or principles can never be involved in empirical cognition, and since empirical cognition is the only means of establishing a well-grounded existence claim, the objects picked out by such principles or concepts either cannot or may not exist. In ways that shall become clear later, I want to resist this dominant interpretation. For now, let us consider the arguments and ideas animating these dominant readings of Kant.

[39] For a classic example of this position, see Paul Guyer's (2003) interpretation of reflecting judgment and its regulative principles in his "Kant's Principles of Reflecting Judgment." There, he argues that an organism is a regulative ideal that serves as a heuristic, facilitating our progress toward a complete mechanistic understanding of a natural product. Another heuristic function that the regulative ideal of an organism performs is that it facilitates reflection upon *the whole of nature* as a purposive system, a thought that will itself serve a higher moral purpose (see Guyer 2003, 48-51).

3.3. Regulative principles in the Critique of Pure Reason

Skeptical and deflationary readings of regulative principles already have strong footing in Kant's *Critique of Pure Reason*. Commentators widely agree that since we cannot empirically cognize the objects of pure reason – God, our freedom, and the soul – either it is completely unclear whether these objects exist or they flat-out do not exist. Those who infer that these objects may or may not exist on the basis of their uncognizability adopt a skeptical reading. Those who deny the existence of these objects based on their uncognizability adopt a deflationary reading. In this section, I focus on the regulative use of the idea of the soul to illustrate these readings and their commitments.

Commentators often agree that the regulative use of the idea of the soul entails the deployment of a mental projection that guides the effort to unify cognitions of inner sense into a system of cognitions. While they do mention the object of the idea (i.e. the soul *qua* substance), they also speak of the use of this idea as directing something in the subject – the understanding – toward a goal. It is this second aspect of the use of ideas that has stood out to most commentators, for they often claim that there is no need to treat the object of the idea as anything more than a hypothetical posit the existence of which can never be proven or disproven.

These readers generally hold that the regulative use of ideas of pure reason does not presuppose any antecedent commitment to the existence of an object corresponding to the idea. As I mentioned above, they are of two stripes. Some take a deflationary approach, thinking that, in the regulative use, Kant flatly denies the existence of any object corresponding to the idea. Others are skeptics, holding that, in the regulative use, Kant neither affirms nor denies the existence of any object corresponding to an idea of pure reason. Let us consider why this is a standard way of reading the Appendix.

The deflationary line is typified by Henry Allison and Frederick Rauscher. Allison treats the regulative idea of the soul as an epistemic "application condition" for the logical principle of systematic unity. Such a systematic unity is a "necessary projection of reason" – one which reason cannot help but foist upon nature given its assumption that certain transcendental principles obtain (2004, 445-6). Assigning the idea of the soul in its regulative use the status of a "necessary projection of reason" contrasts it with a so-called "pre-given norm", which would posit the reality of that which we project and seek when we regulatively employ the idea (2004, 46). Thus, Allison rejects the reality of an object corresponding to any idea and considers the objects we seek a mere projection. Rauscher argues that "The idea of the soul is *not taken to correspond to any reality in itself,* but is used functionally to unite various cognitions of the understanding together to form an empirical science. Like any idea of reason qua idea […], the idea is taken only to be a placeholder in the system for organizing cognitions" (2010, 298, my emphasis). Rauscher states that the idea of the soul does not correspond to *any* reality in itself, for it serves its regulative role as long as we assign the role of an imagined "placeholder."[40] And so, like Allison, he takes the regulative use of the idea of the soul to serve an important cognitive function, but considers any commitment to the existence of an object corresponding to the soul untenable.

Other commentators, such as Cory Dyck (2014), seem torn between skepticism and deflation. Dyck argues that Kant "emphasizes the necessity of the presupposition of the soul as the empirically given object of inner experience" which guides psychological investigation (2014, 200). As such, Kant accepts that there is a single fundamental force of the soul, but denies that the

[40] Rachel Zuckert (2017) has expressed a similar position, arguing that the ideas of pure reason are "optimistic placeholders": "they function as encouragement to investigation, suggesting (if illusorily) that *there is* something "out there" to be found in ongoing empirical investigation. Precisely because they are nearly empty, however, the ideas do not predetermine the results of that investigation; they are *mere* placeholders for the empirical results of properly empirical investigation" (2017, 89-90). Despite her relative "optimism" about the placeholders represented by each idea, I take Zuckert to be echoing the skeptical refrain that we can project a mental unity without any existential commitments.

rational psychologist can ever achieve cognition of this single force. To boot, claims Dyck, "it is only in its illusory appearance as a persisting object of inner experience that the idea of the soul can serve to regulate the investigation into the soul's fundamental forces" (2014, 200). Thus, the attempt to derive all of a subject's powers from a fundamental power is guided by an illusion. He claims that the task of seeking an object corresponding to the soul does not require any commitment to the existence of that object, since it is only an illusory appearance. On one interpretation of his view, Dyck seems to be an deflationist: labeling the object corresponding to the idea an illusion suggests that it does not exist. On another, Dyck is a skeptic: we should posit an empirically given object, but, since it is illusory, we cannot ever be certain of its existence.

Katharina Kraus (2018) exemplifies the skeptical attitude toward the objects corresponding to ideas of pure reason. Kraus's overarching concern in "The Soul as the 'Guiding Idea' of Psychology" is the status of empirical psychology as a discipline that falls short of science. In order to redeem the status of empirical psychology, Kraus argues that the object corresponding to the idea of the soul "delineates the domain of mental phenomena by representing a projected whole that logically precedes all mental states to be investigated in psychology" (2018, 77). The idea of the soul thereby provides "an indispensable guideline for approximating the universality and the logical perfection of rational sciences" (2018, 77), satisfying Kant's demand that a science be a system unified "under one idea" (A832/B861). When explaining how the regulative use of the idea of the soul works, Kraus draws attention to the *focus imaginarius* passage from the first part of the Appendix, stating that the idea of the soul is "regulatively used in order to hypothetically assume" a fundamental power into which a manifold of powers is simplified (2018, 84). She also states that the idea of the soul defines the domain of psychology by "*representing* a *projected whole* that logically precedes all mental states to be investigated by psychology" (2018, 85, my emphasis).

While she does not clearly commit to a reading of what it means to "hypothetically assume" a power or to represent a "projected whole", her pronouncements evoke a skeptical reading of the regulative use of the idea of the soul. To label the idea of the soul a mental projection that logically precedes its parts is to employ this idea as an empty heuristic tool without staking any commitments to the existence of an object corresponding to the soul.

Many of Kant's claims in the Appendix to the Transcendental Dialectic can seem to lend themselves to a skeptical and even a deflationary interpretation. For starters, most readers who adopt either reading can easily explain Kant's definition of the ideas of pure reason in their regulative use as *foci imaginarii* (A644/B672). The deflationist, for instance, might hold this out as evidence that the ideas of pure reason in their regulative use are merely convenient fictions, imaginary points that we project into the distance in order to guide the understanding. The skeptic reader, too, might point to the *focus imaginarius* passage as proof that regulatively employed ideas are helpful tools for organizing a manifold of cognitions, but that we need not take a stance on the existence of any object corresponding to the idea. After all, Kant emphasizes that the chief purpose of these ideas is to steer the understanding to a certain goal.

These readings of the Appendix provide a natural explanation of Kant's apparent "as-if" attitude throughout the text. Kant claims that employing the idea of the soul as a regulative principle requires us to treat inner experience *as if* it belongs to a simple and personally identical substance (A672/B700). Once again, the deflationist may interpret the as if language here as suggesting that we treat the various predicates often fallaciously attributed to the soul (i.e. substantiality, simplicity, and personal identity) as various properties of a projected, non-existent entity. Regardless of its unattainability, projecting such an entity would allow us to effectively unite our cognitions of inner sense so as to bring about a science of psychology. Likewise, the

skeptical reader of this passage might take Kant's formulation to indicate the absence of any need to commit oneself to the existence or non-existence of a simple, substantial, and personally identical soul.

Third, both skeptical and deflationist readings seem to explain quite easily Kant's claim that the ideas of pure reason in their regulative use provide us with a schema in contrast to giving us the object in the idea. Kant explicitly states that the regulative use of the idea of the soul can "signify nothing other than the schema of a regulative concept" (A684/B712). At the outset of the second half of the Appendix, he identifies the schema produced by the regulative employment of an idea as that "for which no object is given, not even hypothetically, but which serves only to represent other objects to us, in accordance with their systematic unity" (A670/B698). This schema projects a template for unifying the manifold of cognitions of inner sense into a systematic unity, thereby guiding the formation of a science. Skeptics and deflationists can furnish us with a straightforward reading of this process: reason projects a systematic unity for the understanding, allowing cognizers to steadily progress toward a systematic unity of cognitions without staking any commitment to the existence of an unconditioned unity. As long as one aims at the systematic unity represented in the schema, the task of constructing a science can get underway.

Thus it is clear that the objects pertaining to these ideas and principles can ever be empirically cognized, or beheld by us in space in time. Nevertheless, as we shall see later, we ought to avoid the temptation to conclude that we cannot say these objects exist on the basis of their uncognizability. One major insight I hope to highlight is that these prominent readings of Kant's doctrine of regulative ideas and principles are mistaken in their assumption that empirical cognition is the only means of assenting to the existence of some object. There are alternative means of affirming that the objects of judgments or representations based on regulative principles

exist. Before I explain how this is possible, let's consider how deflationary and skeptical readings influence interpreters of Kant's doctrine of reflecting judgment and its reliance on regulative principles in the third *Critique*.

3.4. Back to regulative principles in the Critique of the Power of Judgment

Most of the readers I have identified with the moderate mechanistic reading of Kant's doctrine of nature adopt a skeptical interpretation of regulative principles in and beyond the *Third Critique*. To these readers, regulative principles generally do not entail any ontological commitments to the existence of some object. Reflecting judgments are based on a regulative principle. Thus, when we attribute a non-mechanistic purposiveness to nature via reflecting judgment, we are not making a claim about the existence of purposiveness in nature. Instead, the regulative principle of purposiveness, or the assumption that nature is organized in accordance with a technical, purposive causality and not merely determined by mechanism, is a projection that serves our mental economy.[41] A skeptical view of regulative principles and the moderate mechanistic interpretation of Kant's picture of nature go hand-in-hand.

Likewise, a deflationary interpretation of regulative principles fuels strong mechanistic readings of Kant's doctrine of nature. This connection is expressed most clearly in the work of Peter McLaughlin. The central ambition of McLaughlin's 1990 *Kant's Critique of Teleological Explanation in Biology* is to construct an argument to the conclusion that that teleological explanation is illegitimate in order to secure the most important positive claim he wants to defend in the book – namely, that mechanistic reduction is the only legitimate form of explanation in biology. To McLaughlin, when evaluating the candidates for a legitimate form of scientific

[41] As we saw earlier (see Introduction sections 1 and 2) and shall see below (see Chapter 6), this is a line on Kant we can attribute to Hegel, Schelling, Hanna Ginsborg, James Kreines, John Zammito, Rachel Zuckert, and others.

explanation in biology, we find there are two options: either mechanistic reductive explanations or teleological explanations count as legitimate forms of scientific explanation. An explanation counts as legitimate only if it refers to something that exists. Therefore, if teleological explanations are legitimate, it would follow that they refer to something that exists. But, crucially, teleological explanations rest on regulative principles. If an explanation rests on regulative principles, McLaughlin affirms, then the object of that explanation does not exist. Therefore, teleological explanations refer to something that does not exist. This implies that teleological explanations cannot be a legitimate form of scientific explanation. For this reason, he resolves, "Kant affirms in the end the exclusive legitimacy of mechanistic-reductionist explanations" (1990, 180).

Notice that McLaughlin advances a deflationary reading of regulative principles, defending the premise that explanations or judgments resting on regulative principles tell us nothing about the existence of a thing. McLaughlin asserts that teleological explanations rely on *regulative* principles, stressing that explanations founded on such principles do not refer to anything real. Let's explore and evaluate McLaughlin's reasons for asserting these claims.

One example of a regulative principle is the idea of God as it's described in the Appendix to the Transcendental Dialectic: "God has no objective reality, and the concept has no empirical meaning; but it can at least still function as the transcendental presupposition of a sensible methodological principle for empirical science" (1990, 35). Given this kind of statement, we may understandably wonder, What does McLaughlin mean when he says that a concept has "no empirical meaning"? We cannot cognize the object pertaining to the idea of God, surely. But Kant seems to think that such a concept can guide serve as a "sensible methodological principle for empirical science." If a concept can serve as a legitimate principle for *empirical* science in its regulative use, this does not automatically mean that it's utter nonsense or a complete fiction. To

base a legitimate science on such a concept would certainly render that science illegitimate. Kant must mean something very specific and idiosyncratic when he claims that a concept like <God> has no empirical meaning. Indeed, we should read Kant as saying not that such a concept lacks empirical meaning, but that the object it represents cannot be intuited in space and time and therefore cannot be empirically cognized, and since it cannot be empirically cognized it is not in any relevant sense real. McLaughlin deflates regulative ideas.

McLaughlin thinks that the principle of purposiveness in the third *Critique* plays an identical role as the ideas of reason in their regulative use. In the *Critique of the Power of Judgment*, "When we classify and order empirical objects, we *presuppose* that nature has order" as our principle of ordering (1990, 36). Again, McLaughlin seems to be indicating that such a principle is convenient for the sake of explaining order in nature, but it does not disclose the way nature really is. In short, on McLaughlin's view, both the ideas of reason in their regulative use and the principle of purposiveness of the *Third Critique* allow us to formulate certain kinds of explanation, but neither the principles themselves nor the explanations based upon them tell us anything about what the thing we're explaining *really is.* Teleological explanations rely on regulative principles. Thus, they do not refer to anything that exists.

The thesis that regulative principles and representations tell us nothing about the way in which the objects picked out by regulative principles or representations is crucial for all mechanistic readings of Kant. McLaughlin's reading in particular states that the principle of purposiveness is regulative, and therefore has "no empirical meaning." It does not, this seems to mean, pick out or refer to anything that exists. Since the principle of purposiveness is regulative, even if this principle helps the explainer organize their mental life and formulate explanations for

phenomena that would otherwise be unexplainable, any explanation that relies upon it will not tell us anything about the way the world is.

McLaughlin also deploys this understanding of regulative principles in developing his strong mechanistic reading of nature in Kant. For Kant, when we call a thing an organism, we attribute to it a kind of purposiveness. When we attribute any purposiveness to a thing, we do so on the basis of a teleological judgment. Teleological judgments rest on regulative principles, and this in turn means that we cannot know that the objects of teleological judgments exist. Thus, insofar as an organism is the object of a teleological judgment, we cannot know that any organisms exist. As we shall see later, McLaughlin adds that we know for a fact that all objects presented to us in outer sense exist. The objects we label organisms are presented to us in outer sense. Importantly, any object presented to us in outer sense is merely a machine, thoroughly explained by the Laws of Mechanics. Thus, anything we label an organism only exists as an object of outer sense, and since all objects of outer sense are mere machines, an organism is really just a machine.

The following passage does a good job of illustrating precisely how McLaughlin reasons from his reading of purposiveness to the claim that organisms do not exist:

> Organisms are objects of experience. Everything that Kant later says about natural purposes applies to the organism only insofar as it must be conceived as a natural purpose. The concept of the organism itself has "objective reality" because there are actually corresponding things in sense experience, i.e. animals and plants. The concept of natural purpose has objective reality only if there are objects of experience that are natural products and can only be conceived as if they had been produced intentionally by some understanding. If such things should exist (or if, as Kant tends to believe, organisms are such things), then the concept of natural purpose, too, has objective reality, i.e. instantiation in experience; *but we can never know this definitely*, since our ability to conceive of particular objects of experience as non-intentional may change with time and the progress of science. (1990, 46-7, my emphasis in italics)

Up until the last independent clause, one might read McLaughlin as rejecting a mechanistic reading of natural purposes, taking it to be a concept that tracks the existence of a particular kind of entity

or property. He states that organisms are objects of experience, accepts that everything Kant says about a natural purpose must apply to organisms, and that therefore the concept of a natural purpose must itself have "instantiation in experience." On his account, this would be to say that natural purposes exist, and perhaps that referring to a thing as a natural purpose means that it really is a natural purpose. However, he qualifies all of that when he says that "we can never know this [i.e., whether a natural purpose exists] definitively." It is unclear what it would mean to "know definitively" on Kant's account, but we should take this to be a compressed way of expressing a commitment shared by all mechanists: The concept natural purpose has no "objective reality", we cannot empirically cognize the objects to which this concept refers, and so we cannot say that organisms exist.[42] Rather, McLaughlin adds, since the things we label organisms are presented to us in space and time, we should instead accept that they are nothing more than machines. By conjoining the claims that we cannot empirically cognize organisms, that machines are the only things we empirically cognize, and empirical cognition is the only means of establishing the existence of a thing, McLaughlin puts forward a strong mechanistic picture of nature that is funded by a deflationary view of the regulative concept of an organism.

4. Where do we go from here?

There is one interpreter of Kant that takes a firmer-than-skeptical stance on the status of the presuppositions we make about objects and the world in a regulative mode. In his 2003 "Kant's

[42] This is a line of argumentation McLaughlin maintains for decades. In "Mechanical Explanation in the *Critique of the Teleological Power of Judgment*," he asserts that the concept of a real, objective, inner purposiveness has no objective reality. Instead, it is a "marker that indicates we are dealing with a natural purpose" (2014, 157). If organisms existed, we would have available to us something more than a mere marker that we are "dealing with" this concept. Yet because the cognitive tools we have at our disposal leave us ignorant about the existence of organisms, we have to settle for mere "markers."

Principles of Reflecting Judgment", Paul Guyer characterizes regulative concepts and principles along the following three criteria:

> From Kant's account of the regulative principles in the *Critique of Pure Reason*, we can therefore infer that such principles (a) set a goal of the systematization; (b) accompany this goal with a transcendental presupposition that the objects of our inquiry or action make the attainment of this goal possible and that there is a ground for this assumption, but one that permits at best a limited transcendental deduction; and (c) provide a heuristic method for the pursuit of this goal, but one that is irremediably liable to the contingencies of our empirical situation. (2003, 18)

The second criterion is of particular note for our purposes. Guyer asserts that the presuppositions we make about objects and the world when discharging a regulative principle rise to the level of belief concerning the existence of the objects in question: "it would be irrational for us to pursue any goal, cognitive or practical, in the absence of a belief in the *possibility* of tis attainment. For that reason, a regulative principle posits, or is accompanied by the posit, that the *domain* of our inquiry or action—nature itself—is so constituted as to make the attainment of our goal *possible*" (2003, 4). Passages such as these might lead us to suspect that Guyer puts forward a firmer-than-agnostic stance regarding the regulative concept of an organism and its role with respect to teleological judgment. Indeed, with respect to reflecting judgment in general, Guyer writes, "Each form of reflecting judgment involves an attempt to realize an ideal of the systematic unity of the relevant material that can only be expected to be realized within certain limits. In each case, we posit not only an organization internal to our thoughts, but also a corresponding organization in the objects of our thoughts, which makes it possible to represent them as so ordered, and we even further posit an actual ground for that possibility" (2003, 20).

These passages might lead us to suspect that for reflecting judgment and the regulative concepts they deploy, we posit, as an article of belief, the actual ground responsible for the form of organization we find in the objects of our thoughts. However, our reflecting judgments involving

the regulative concept of an organism seem to stand out as an exception to these rules when Guyer states the following: "although in a general sense we are given the concept of the organism, that concept is only an abstract concept of a kind of system that serves as a regulative ideal for our investigations, and in these investigations, we ultimately seek mechanical concepts of causation that can explain generation, growth, and self-preservation, even though we may be barred from completing these explanations" (2003, 45). Despite the fact that Guyer insists that we have to believe in the existence of the objects pertaining to regulative principles and concepts in order to avoid rendering our pursuit of these objects impossible or absurd, here he seems to suggest that we are not entitled to the same kind of presupposition when deploying the regulative concept of the organism. When we deploy this regulative concept, we ultimately know that we are seeking a non-teleological explanation of the natural object. In this sense, the regulative concept of the organism represents an exception to his general interpretation of regulative concepts and their objects: We do not believe in the existence of the object corresponding to the organism, for this concept merely facilitates the advancement of our mechanistic understanding of nature. This regulative concept is unique in that it *does not* elicit belief in the existence of any object pertaining to it.

But we should find it puzzling that the regulative concept of an organism is an exception to the general criterion Guyer announces at the outset of his essay. As we have seen, Kant affirms that our reflecting judgments and their principles are neither blind nor arbitrary and that these principles should agree with nature. Furthermore, Kant tells us that nature furnishes us with examples as well as provocative hints and suggestions that purposive particulars abound. Why establish an exception to the rule that regulative concepts require a belief in the existence of the object pertaining to them when discussing the organism?

While the extant literature on regulative principles contains a push to either deny or be totally agnostic about the existence of those objects we presuppose for the sake of reflection, I shall argue that there is ample textual evidence supporting the rejection of these dominant interpretations and pointing us in a new direction. Surely, we cannot *empirically cognize* the predicates we attribute to an object when we reflect upon it. We cannot empirically cognize the property of an object by virtue of which we judge to be beautiful, nor can we empirically cognize the property of a cat by virtue of which its activity appears organic to us.

Yet, Kant is clear that there is evidence for both nature's mechanism and nature's teleology. Though we have a considerably firmer grasp on the mechanism of nature, Kant does not outright reject the possibility that nature and natural products are purposive. Nowhere does he state that organisms are a mere fiction. And while we might be tempted to infer, based on certain interpretations of certain passages, that we cannot say whether organisms can exist one way or the other, Kant is adamant that nature *suggests* its internal purposiveness to us; that nature furnishes us with examples of this purposiveness; that experience leads us to its internal purposiveness; and that we *find* this internal purposiveness in nature. Add to this the fact that, while organisms are the objects of reflection upon nature, reflection is not a mental act that makes no reference to entities beyond the subject or the subject's faculties. Reflection tracks the relation between a given particular (or given particulars) and the interactions of our mental faculties, and Kant affirms that reflecting judgments cannot be blind and arbitrary, but ought to agree with nature. Although we never empirically cognize the inner purposiveness of nature and natural products, Kant's philosophy does not confine us to a mechanistic picture of nature.

In what follows, I argue that we can, and *must*, believe that there is real internal purposiveness in nature. That is, we can and must believe there are organisms in nature. Note that

belief, in the sense that I discuss throughout the remainder of the project, is compatible with the regulative status of the concepts and principles involved in reflecting judgment. The claim that regulative principles or concepts can be understood in terms of belief is not a completely novel one; Andrew Chignell suggests that regulative principles can "fit the profile" of belief (2007, 351). My contribution to the literature can be summed up as an elaboration of how precisely the regulative concept of an organism "fits the profile" of belief. In some sense, my project intends to extend Guyer's general criterion regarding the need to believe in the objects pertaining to regulative principles to the regulative concept of the organism.

My case for this contribution begins with a close reading of the Antinomy of the Teleological Power of Judgment. We shall see that, in this section, Kant does not make organisms out to be mere fictions or mental projections. Rather, there are proper occasions upon which to reflect on nature as organic. Furthermore, it seems like these proper occasions will endlessly arise, since mechanism can never provide a complete explanation of nature. In the following two chapters, I argue for my positive contribution to this literature. There are *theoretical* grounds for believing in the objects we presuppose for the sake of reflection (Chapter 6), and there are also *moral* grounds for believing in these objects (Appendix I). We need not infer from the claim that the causality characteristic of organisms cannot be empirically cognized to either the claim that there are no organisms or the claim that we cannot whether there are organisms one way or the other. And this is because it is possible, and in some cases advisable, to believe in the organism.

Chapter 5. Organisms and nature in the Antinomy of Teleological Judgment

In the Analytic section of Kant's *Critique of the Teleological Power of Judgment*, we have been introduced to a rather perplexing concept – that of a natural end. There are certain objects in nature the form of which leads us to judge that they are objectively, really, and internally purposive. In other words, there are things in nature that appear to exhibit a purposiveness of their own, organizing their structure and activities in accordance with ends.

The Antinomy of the Teleological Power of Judgment juxtaposes two viewpoints with respect to the possibility of purposiveness in nature. On the one hand, it seems that there cannot be purposive things, such as organisms, in nature, for everything in nature must be considered subject to the laws of mechanics: "Insofar as reason has to do with nature, as the sum of objects of the outer senses, it can be grounded on laws which are in part prescribed *a priori* to nature by the understanding itself, and which can in part be extended beyond what can be foreseen by empirical determinations encountered in experience" (*CPJ* 5:386). The mechanistic laws of nature not only explain all objects of outer sense before us, but have the predictive power to explain what can be "foreseen by empirical determinations." Thus, it appears that nothing which could appear to us in nature cannot be covered by the laws of mechanism. On the other hand, the laws of mechanics can only explain the unity of nature to a degree, and there is a unity in nature that seems contingent or gratuitous from the perspective of the mechanistic mode of explanation. Puzzlingly, according to Kant, we resolve the antinomy when we realize that these two viewpoints are ultimately compatible in our investigations of nature.

The chief goal of this chapter is to offer a close reading of the presentation to and the resolution of Antinomy, paying special attention to how the Antinomy affects the possibility that

there are *internally purposive* entities, or organisms, in nature. Along the way, I emphasize a point that is indispensable for my purposes – namely, that while Kant clearly denies us the ability to make a determining judgment about the organism and precluding us from establishing the objective reality of this concept, this does not warrant a leap to the conclusion that organisms are a mere convenient fiction or mental projection. There is a spectrum of possibilities between empirically cognizing the organism and rendering it a merely imaginary projection. The goal of the next is to animate that middle-ground. For now, I highlight the merely negative point that the Antinomy of Teleological Judgment does not license the conclusion that we can know there are no internally purposive entities in nature.

Another goal of this chapter is to advance a unique account of the mechanical inexplicability of the organism. Though Kant says that we should apply mechanistic explanations to nature as far as we possibly can, he contends that there could never be a "Newton who could make comprehensible even the generation of a blade of grass according to natural laws that no intention has ordered" (*CPJ* 5:400). Commentators often take this to be Kant's definitive pronouncement of the mechanical inexplicability of organisms. Below, I develop an original account of the mechanical inexplicability of organisms, one that draws on the conceptual analysis of the organism and life in the previous chapters of my dissertation.

Sections 1-5 contain a step-by-step analysis of Kant's presentation of and resolution to the Antinomy. Section 1 details the presentation of the Antinomy. Here, I not only discuss the difference between the constitutive and regulative versions of the Antinomy, but also explain what the ramifications of the unprovability of the constitutive principles are and consider why we are justified in applying a teleological maxim of reflection when investigating nature. This section also offers an original diagnosis of the dialectical error involved in the Antinomy, one that is consistent

with Kant's pronouncement that this antinomy has to do with the reflecting power of judgment specifically. Section 2 discusses the various dogmatic systems rejected in the Antinomy. Section 3 turns to Kant's critical inquiry regarding our power of reflecting judgment. An important takeaway I emphasize here is that, while Kant denies us the ability to make dogmatic determining judgments about natural ends, this is merely a negative point, and just because we cannot make determining judgments does not warrant that organisms are a mere fiction or projection. In fact, many of Kant's remarks in (and surrounding) the Dialectic suggest that an organism is much more than a mental heuristic. Section 4 dissects Kant's complicated remarks on the nature of the understanding in sections 76 and 77 of the Antinomy, drawing attention to those remarks about the range and limits of mechanical explanation. Section 5 provides a close reading of the final section of the Dialectic, and my purpose here is to emphasize that the subordination of mechanism to teleology is crucial for understanding Kant's resolution to the Antinomy. Section 6 complements my emphasis on the subordination of mechanism to teleology by giving an account of the mechanical inexplicability of organisms that pinpoints precisely where mechanism must yield to teleology when explaining a natural product.

1. Sections 69-71: Kant's presentation of the Antinomy

The Dialectic of the Teleological Power of Judgment opens with a reflection on the difference between the maxims of the reflecting power of judgment and the structure of the determining power of judgment. On the one hand, the determining power of judgment is given laws or concepts as its principles, and it then it applies these laws and concepts to given intuitions. For this reason, Kant thinks, this species of judgment "is not exposed to any danger from its own antinomy and from a conflict of principles" (*CPJ* 5:385). On the other hand, the reflecting power

of judgment is not yet given laws, so it needs to find its own principle. Upon reflection on what these maxims of the reflecting power of judgment are, we encounter a conflict. The "unavoidable illusion" that emerges from reflecting on our maxims can only be dispelled by a thorough critique of the limits of our power of judgment.

The overall strategy of Kant's Antinomy of the Teleological Power of Judgment consists of two moves. The first move is to demonstrate that we cannot mistake merely regulative principles for reflecting on nature for claims about the genuine constitution of nature and its objects. Once we are clear about the difference between these two kinds of claim and how to avoid sliding from one set to the other, the second move is to show how the principles of judgment that regulate our reflection on nature are deeply compatible with one another. Here are the regulative principles governing reflection on nature:

> M: All generation of material things and their forms must be judged as possible in accordance with merely mechanical laws.
>
> T: 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).

The first proposes that all "generation of material things and their forms" must be judged as possible in accordance with merely mechanical laws. What I take this to mean is that all generation of things in nature must be judged specifically in accordance with the Second Law of Mechanics, which states that for every change in matter, there must be some antecedent change in matter. Thus, all things in nature and their form are purely material results of some antecedent change in matter.[43] The second states that some products of nature can only be judged in accordance with an "entirely different law of causality, namely that of final causes." What I take this to mean is that the

[43] Contrast this with McLaughlin 1990 and 2014 as well as Ginsborg 2015. In Section 6, I analyze what exactly mechanism is in the context of defending a specific interpretation of the claim that organisms are mechanically inexplicable.

generation and form of some products in nature cannot be explained by some antecedent change in matter. Rather, they require an appeal to final causality, where final causality is a special sort of causal nexus that has an end, which Kant sometimes glosses the concept of an object insofar as it grounds the reality of that object.[44] This structure of causality is fundamentally distinct from a causality governed by merely mechanical laws because mechanical laws only explain interactions between material objects presented to us in outer sense. An end is not a material object presented to us in outer sense, hence the need for an entirely different law of causality.

If we "transform" these principles into claims about the constitution of objects in nature, we get the following two principles:

> M*: All generation of material things is possible in accordance with merely mechanical laws.
>
> T*: Some generation of such things is not possible in accordance with merely mechanical laws.

Kant immediately adds that, if these two principles are taken to be "objective principles for the determining power of judgment," they would be contradictory, and so one or the other would be false. However, reason cannot prove the truth of one or the other of these fundamental principles, as "we can have no determining principle *a priori* of the possibility of things in accordance with merely mechanical laws of nature" (*CPJ* 5:387). If a genuine antinomy is taken to consist in two propositions that can actually be proven to be *true*, as is the case in the *Critique of Pure Reason*'s antinomies, then it seems as if M* and T* do not represent a genuine antinomy at all.

1.1. But what exactly does it mean to say the constitutive thesis cannot be proven true?

Before reflecting on what the dialectical error of this antinomy consists in, we should take a moment to unpack the seemingly controversial claim that the constitutive Thesis of the Antinomy

[44] See section 10 of the *Critique of the Power of Judgment*.

(i.e., M*) cannot be proven true. After all, in places like the Second Analogy of Experience, the Third Antinomy of Pure Reason, and the proof of the Second Law of Mechanics, Kant seems to be telling us that all objects of outer sense are subject to deterministic laws of causality. What is the difference between what Kant proves in the 2nd Analogy, the *Metaphysical Foundations*, and the Third Antinomy on the one hand and the constitutive Thesis "All generation of material things is possible in accordance with merely mechanical laws" (*CPJ* 5:387) on the other hand? Why don't the conclusions of the former group foreclose the unprovability of the constitutive Thesis? Is there a genuine difference, or has Kant simply changed his mind regarding the scope of causality?

As a means of responding to the set of questions, let us turn back to the other sections of Kant's Critical writings mentioned above. In the second edition of the Second Analogy, Kant takes himself to have established that "All alterations occur in accordance with the law of the connection of cause and effect" (A188/B232). Alterations [*Zeitfolge*, more often *Veränderungen*] is the word Kant uses to describe changes in the determination of some object as it appears to me – e.g., if the same object that was two feet to the left of me is now directly in front of me, it has an undergone an alteration. Already we see a contrast between the conclusion of the Second Analogy and the constitutive Thesis of the Antinomy of Teleological Judgment: While the former is about the alterations of an object as it appears to us, the latter is about the "generation" [*Erzeugung*] of "material beings." Both the conclusion of the Second Analogy and the Thesis seem concerned with the very possibility of their objects. The difference is that, while the Thesis makes a claim about the possibility of material beings, the Second Analogy makes a claim about the "objects of experience". In the Second Analogy, Kant concludes that our *empirical cognition* of the alterations a substance undergoes is possible only if we subject the appearances to the "law of causality" (A188/B234). Applying this law of causality is a precondition for a particular mental state – i.e.,

an empirical cognition – not for the very generation of a material being.[45] In the Thesis of the Antinomy, Kant is not concerned with the conditions for the possibility of empirically cognizing an alterations [*Zeitfolge*, *Veränderungen*] of substance, but with the generation [*Erzeugung*] of material things.

The Antithesis of the Third Antinomy comes closer to the constitutive Thesis of the Antinomy of Teleological Judgment, stating that "There is no freedom, but everything in the world happens solely in accordance with the laws of nature" (A445/B473). The Third Antinomy's Antithesis concerns the events of "everything in the world" and subjects them to the "laws of nature" rather than the law of causality. Kant's proof for the Antithesis states that freedom as a "faculty of absolutely beginning a state" contradicts the "causal law", which states that "Every beginning of action…presupposes a state of the not yet acting cause" (A445/B473). Since transcendental freedom is "contrary to the causal law" and all experiences are governed by this law (per the Second Analogy), freedom must be an "empty thought-entity", or something we could never experience (A447/B475). Moreover, Kant claims, "we have nothing but **nature** in which we must seek the connection and order of occurrences in the world" (A447/B475).

In the Resolution to this Antinomy, Kant famously shows that the Antithesis is true, but we must qualify the domain in which its truth obtains. An acting subject can be viewed as **"intelligible** in its **action** as a thing in itself, and as **sensible** in the **effects** of that action as an appearance in the world of sense" (A538/B566). On the one hand, a subject that acts as cause "in its intelligible character, would not stand under any conditions of time, for time is only the condition of appearances but not things in themselves" (A539/B567). This intelligible character could not be cognized or perceived, but "would have to be **thought** in conformity with the empirical character,

[45] In the first edition, the subtitle of the Second Analogy read "Principle of Generation." Kant changes it to read "Principle of temporal sequence according to the law of causality" in the second.

just as in general we must ground appearances in thought through a transcendental object" (A540/B568). This character would ground an appearance from outside the realm of appearances. In contrast, the thing as it appears to us is "subject to the causal connection, in accordance with the laws of determination; and to that extent it would be nothing but a part of the world of sense, whose effects, like those of any other appearance, would flow inevitably from nature" (A540/B568). So, the Antithesis of the Third Antinomy is true from the perspective of outer sense: The actions of a subject as they appear to us in space and time happen solely in accordance with the general metaphysical laws of nature. Another aspect to emphasize here is that the Third Antinomy relates to the actions of a subject, and in this respect it seems to differ from the topic of the Thesis of the Antinomy of Teleological Judgment.

Whereas the Second Analogy and the Antithesis of the Third Antinomy discuss the conditions for the possibility of our empirically cognizing the alterations of a substance, the Second Law of Mechanics, as stated in the *Metaphysical Foundations of Natural Science*, reports that "Every change in matter has an external cause" [*Alle Veränderung der Materie hat eine äussere Ursache.*] (*MFNS* 4:543). Now we are no longer discussing alterations or changes of substance as such, but changes undergone by *matter* [*der Materie*]. Matter is defined as that which is movable (*MFNS* 4:536) and has mass [*die Masse*] determinately shaped in the form of a body [*ein Körper*] (*MFNS* 4:537). A material body is infinitely divisible (*MFNS* 4:537). The motion of a material body (and its parts) are governed by the three laws of mechanics, which parallel the three Analogies of the *First Critique*: i.e., in all changes of matter, the quantity of matter neither increases nor diminishes; every change in matter has an external cause; and in all communication of motion, action and reaction are always equal. The laws of mechanics therefore govern, and explain, all changes [*Veränderung*] of matter as well as the motion [*Bewegung*] communicated from one

material body to another. It is worth noting that, in the final General Remark of the Mechanics, Kant distinguishes between "the concept of change in general" [*Begriff einer Veränderung überhaupt*] and the generation thereof [*der Erzeugung derselben*] (*MFNS* 4:553). While this is far from a straightforward analysis of the relationship between these two concepts, the grammatical relationship between the terms – changes presuppose generation – suggests a certain priority of generation over change. Perhaps we could say that if something changes, then that change was generated (by some force, power of a substance, etc.). Generation describes the production or the genesis of that which can be subject to changes in the first place.

Let us return to the Thesis of the Antinomy of Teleological Judgment. Why doesn't the truth of the principle of the Second Analogy, the resolution of the Third Antinomy, and the Second Law of Mechanics entail the truth of the constitutive Thesis of Antinomy of Teleological Judgment? An initial, albeit underdeveloped, answer is that there is an obvious difference in subject matter across the first group and the constitutive Thesis. The latter has to do with the generation [*Erzeugung*] of material things and not the possibility for empirically cognizing or explaining the changes in the determinations of material things. We might treat questions of generation as having to do with the *origin* of material beings, not the alterations they undergo and why. This much seems to be suggested by Kant's prefatory remark when introducing the constitutive principles – namely, that these principles have to do with the very "possibility of objects themselves" (*CPJ* 5:387). We might interpret the content of the constitutive Thesis and Antithesis as pertaining to the very beginnings of material things – i.e., describing how it is even possible that such objects came about, as statements about their ultimate origins. Things need to come about in order for them to undergo changes in the first place. In this sense, the constitutive thesis is deeper than or upstream from the conclusions, resolutions, or principles of the first *Critique* and *Metaphysical Foundations*. It is

impossible to give an account of a change or alteration of the state of the some object without that object having been generated in the first place. The constitutive Thesis of the Antinomy of Teleological Judgment gives us a story about how such objects could have come about.

If this reading is on the right track, then there is a subtle, but important, presupposition animating Kant when framing the Antinomy of Teleological Judgment. If it is possible that certain objects were generated by means of a non-mechanistic causality, then it is possible to judge the production and activity in nature in accordance with a teleological causality. In contrast, if we could prove that material things were only generated in accordance with mechanical laws, it would not make sense to apply teleological explanations to natural products on *any* occasion. Think about it this way. If all material things were indeed generated in accordance with merely mechanical laws, then it is impossible that, as Kant maintains in the build up to presenting the Antinomy, nature would even suggest its purposiveness to us in the organization of certain products. It subsequently wouldn't make any sense to posit the antithesis of the regulative maxim as a *necessary* way of judging of nature. Of course, that we can never determinately judge nature's teleology is equally proof that the constitutive Antithesis can never be proven true. Because it is simply undecided how material things came about in the first place, it is not incoherent to judge nature in accordance with *both* regulative principles of reflecting judgment. Because the status of how objects of nature were generated remains undecided, teleology and mechanism represent equally necessary ways of judging nature and its products.

To be clear, at this point, Kant has not contradicted the laws of mechanics or the conclusions of the first *Critique*. In accordance with the laws of mechanics, all changes in matter observed through outer sense are still completely determined by the Law of Inertia. In accordance with the first *Critique* our *empirical cognition* of the alterations of substance are only possible in

accordance with the principle of the Second Analogy. However, it is still possible that there is a supersensible but non-mechanistic cause that generated natural ends, and therefore it is possible to judge that there is purposiveness in nature by non-empirically-cognitive (i.e., reflective) means. The unprovability of the constitutive Thesis makes room for a wider range of epistemic attitudes and mental acts we can deploy in our investigations of nature.

My account of the constitutive principle of mechanism differs from that of Peter McLaughlin (1990). McLaughlin follows A.C. Ewing in holding that the constitutive Thesis proves that Kant thought of mechanism and the concept of causality as non-identical (1990, 142). Specifically, mechanism is a species of causality that describes a particular method of explaining a whole by reducing it to its parts. However, following Marcel Quarfood's (2004) criticism of McLaughlin, one might think it is unlikely Kant limits "mechanism" to just this sort of part-whole reduction. For one, Kant explicitly rejects the whole-to-part reductionism characteristic of Boylean corpuscular philosophy, while McLaughlin maintains that this is the style of explanation Kant had in mind when discussing mechanism (see McLaughlin 1990, 176). Moreover, as Quarfood points out, Kant appears to have a dynamical conception of mechanism in mind when introducing the concept in the *Metaphysical Foundations*. Quarfood gestures to Kant's distinction between mechanical and chemical action as evidence of this (see AK 4:530), which defines mechanism in terms of the motion communicated between moving bodies.

Following Quarfood, I believe it is more accurate to think of mechanism as a species of causality, one having to do with the transmission of forces involved in the motion of material bodies. We might derive further support for this from the metaphysical tradition immediately preceding Kant. Baumgarten's textbook on Metaphysics states, "A MACHINE is a composite being in the strict sense that is moveable according to the laws of motion" (§433), takes the

determination of a machine by the laws of motion to be its mechanism (§433), and describes these dynamical relations between mechanical bodies in the world as a causal nexus (§434). And we may also read Kant as following Baumgarten in his own Lectures on Metaphysics, when he defines the mechanism of nature thus: "The arrangement that everything happens in the world according to standing rules can be called the mechanism of nature. The mechanism of a thing is otherwise called the arrangement of a thing according to laws of motion…Thus, in the sensible world, everything goes according to the mechanism of nature, according to natural necessity." (*LM* 29:924) Mechanism is defined in terms much more general than whole-to-part reduction here, indicating the arrangement of a thing according to laws of motion and discussed in a sense that is roughly equated with natural necessity. Kant's account of mechanism seems closer to Ginsborg's (2015) and Quarfood's (2004) proposals than McLaughlin's proposal. At the very least, what these passages seem to show is that, *pace* McLaughlin, mechanism means something much broader than explanation by means of whole-to-part reduction.

On top of this, McLaughlin's reading (and Quarfood's, too) neglects discussion of the important terminological shift from alterations and changes [*Zeitfolge, Veranderungen*] to generation [*Erzeugen*]. This terminological change seems significant because it makes room for the possibility that nature can be judged teleologically. If the Second Analogy, Third Antinomy, and Second Law of Mechanics foreclosed the possibility that non-mechanical things could be *generated*, the suggestions induced by our experiences of nature's contingency (see *CPJ* 5:366, 5:386) would in all likelihood not even lead us to the idea of a natural end. However, nature's manifold suggestions, reason's demand for unity in the face of contingency, and the fact that we cannot rule out the possibility of a final cause generating material beings lend themselves to *both* maxims of the power of teleological judgment being necessary. Just because our empirical

cognition of changes in matter is only possible in accordance with deterministic laws of causality does not entail that all generation of matter came about in accordance with laws of mechanism. And the possibility that material things came about with non- or extra-mechanical laws makes it possible for us to judge such things non-mechanistically – though never in the form of a *determining* judgment.

So, when Kant maintains that the Thesis, constitutively construed, is unprovable, he is saying that we cannot prove that the origin of material things happens in accordance with merely mechanical laws. This, in turn, suggests that only the regulative maxims of judgment are licensed in our research of nature. As Kant insists, we *should* apply the first maxim, which explains nature in accordance with mechanism, as often as we possibly can. But there are proper occasions for suspending that maxim and employing its antithetical counterpart, which states that judging the possibility of some products of material nature requires an appeal to a different "law of causality, namely that of final causes" (*CPJ* 5:387).

1.2.Why insert final causes where mechanism will not suffice?

It is unclear why we should infer from "Mechanical laws do not apply" to "The laws of final causality apply." One reason why is that, in some loose sense, experience beckons us to apply this particular form of causality. As early as §70, when Kant introduces the second maxim of the power of judgment, Kant says that the second maxim is "suggested by particular experiences that bring reason into play in order to conduct the judging of corporeal nature and its laws in accordance with a special principle" (*CPJ* 5:386). This is strikingly consonant with Kant's earlier remark that experience "leads our power of judgment" to the very concept of a natural end (*CPJ* 5:366) and his later remark that the "consequence that answers to it [the concept of a natural end] (the product) is still given in nature" (*CPJ* 5:405).

Kant's remarks here are also consistent with his frequent suggestions that the application of the second maxim to nature is a process that unites reason and experience. Consider, momentarily jumping ahead, the story Kant tells at the end of §76. There, Kant explains that we judge nature in accordance with final causality when we are presented with a particular that "contains something contingent with regard to the universal" (*CPJ* 5:404). Because of its contingency, this particular cannot be neatly subsumed under a discursive concept of the understanding. Still, reason stubbornly "requires unity, hence lawfulness." As a result of this particular's mechanical inexplicability and reason's demand for unity, "the concept of the purposiveness of nature in its products" is introduced as a "concept that is necessary for the human power of judgment in regard to nature but does not pertain to the determination of the objects themselves" (*CPJ* 5:404). Notice that this process is initiated by the discovery of some particular the contingency of which cannot be explained and completed by the intervention of reason and its concept of the purposiveness of nature in its products. This interaction between reason and particulars that are either experienced (in some loose, non-technical sense) or given in nature is described in §74, as well. There, Kant writes that the concept of a natural end "is conceivable only by means of reason" but that this concept is used to judge "that which is given by the objects of experience" (*CPJ* 5:396). This can never license the conclusion that a natural end is a concept used by the determining power of judgment to subsume particulars under a given universal, and so we could never prove the objective reality of this concept. At the same time, from the fact that a natural end is not an objectively real given concept of the understanding it does not follow that this concept has nothing at all to do with objects in nature. Again, our exposure to certain particulars in experience suggests to us that this is the "proper occasion" (*CPJ* 5:387) for judging a thing to be an organism.

Still, we might wonder, why does reason bring *final causality* to bear on these occasions? What about the constitution of this faculty compels us to leap to teleology and not some other kind of causal configuration when presented with these radically contingent particulars? We could piece together an answer to this question by turning back to section IX of the second edition Introduction. There, Kant reminds us that reason legislates the domain of freedom and its causality whereas the understanding legislates nature, or the sum total of all appearances, and the causal connections thereof. On their own, these two domains are "entirely barred from any mutual influence" (*CPJ* 5:195). The determining grounds of freedom in particular are not found in nature, although the effects of this causality take place in the world. I believe that we should read freedom's causality here as fundamentally purposive, involving a cause that is some supernatural, merely represented end (e.g., the idea of the highest good) that determines certain real effects. When faced with a contingent particular in nature that exhibits a purposive unity of its own but is not a rational human being, reason posits a purposiveness that bears a similar structure to freedom's causality, but has a *natural* rather than a *super*natural end as its determining ground. Thus, the very concept of a natural end comes about as a result of reason bringing this form of purposiveness associated with freedom to bear on the natural world, or, as Kant puts it in the first edition Introduction, "through the combination of reason with empirical concepts" (*CPJ* 20:243). As Kant frequently insists, the concept of a natural end that results from the collaboration of reason with experience can only be used by the power of judgment in reflecting, never in determining. Because the concept of a natural end is not thought through the understanding it cannot lead to empirical cognition of a particular, but this concept can still helpfully guide our reflections on those radically contingent particulars that seem to defy the laws of the understanding.

1.3. What exactly is the dialectical error involved in the Antinomy?

So, seeing that the constitutive Thesis and Antithesis cannot be proven true and do not genuinely contradict each other, we might conclude that maxims M and T represent the relevant antinomy. But immediately after discussing M*, T*, and their mutual exclusivity, Kant suggests that the two regulative maxims are compatible with one another. M and T are compatible because, on the one hand, M only states that "I **should** always **reflect** on them [i.e., objects in nature] **in accordance with the principle** of the mere mechanism of nature, and hence research the latter, so far as I can, because if it is not made the basis for research then there can be no proper cognition of nature" (*CPJ* 5:387). The second maxim does not violate the maxim that *I should* always reflect on objects in nature in accordance with the law of mechanics and as far as I possibly can. However, "on the proper occasion," it is appropriate to formulate teleological explanations of things in nature. Indeed, organisms seem to announce such an occasion. Because human reason can never "discover the least basis for what is specific in a natural end" my means of mechanistic explanations, the power of judgment is "forced to think of another principle than that of the mechanism of nature as the ground of the possibility of certain forms" (*CPJ* 5:388).

In this sense, M and T are reminiscent of the thesis and antithesis of the Antinomy of the Aesthetic Power of Judgment, the resolution of which shows that "two apparently conflicting propositions do not in fact contradict each other" (*CPJ* 5:340). If an antinomy consisting of two maxims is resolved by showing that the two maxims are not contradictory and the Antinomy of the Teleological Power of Judgment is between maxims M and T, it would seem as if Kant has presented and resolved this antinomy in the matter of a few paragraphs. Sections 71-78 of the Dialectic are either gratuitous or unrelated to the project of resolving the maxims.

However, we should not be so quick to conclude that the antinomy has been resolved in section 70, for the title of 71 announces that Kant is going to provide a "preparation" for the

resolution of the above antinomy. Given the impossibility of proving the truth of either M* and T* as well as the non-contradictory status of M and T, we should ask ourselves, What exactly is the antinomy Kant is preparing to resolve? Some commentators insist that the antinomies just do consist of M* and T*.[46] Seizing on the fact this is an antinomy of *judgment* and the constitutive principles are ostensibly a "conflict in the legislation of reason", not judgment, other commentators propose that the true antinomy is between the maxims M and T.[47]

Below, I take it for granted that the second camp is right, and that the antinomy arises between the two regulative maxims of judgment. However, there is a separate issue to which we must be attuned before locating and addressing the antinomy: namely, the issue of what the dialectical error characterizing the antinomy is. Most commentators state that the main dialectical error consists in mistaking regulative maxims for constitutive principles.[48] This reading makes sense not only of the fact that Kant does not take himself to have resolved the antinomy after establishing the unworkability of the constitutive principles and the deep compatibility of the regulative maxims. It also coincides with Kant's insistence, at the end of section 71, that "All appearance of an antinomy between the maxims of that kind of explanation which is genuinely physical (mechanical) and that which is teleological (technical) therefore rests on confusing a fundamental principle of the reflecting with that of the determining power of judgment" (*CPJ* 5:389). That is, the dialectical illusion with which Kant is concerned here tempts us to mistake maxims that regulate our reflection on nature for objective principles that are constitutive of nature. However, the literature is somewhat unclear on what the nature of this slide is. Marcel Quarfood (2014) states that this mistake consists in interpreting merely regulative maxims as having some

[46] See McLaughlin 1990, Chapter 3, Section 3.
[47] For a more thorough critique of the first reading and layout of this alternative, see McLaughlin 1990.
[48] See Allison 1991, Quarfood 2004 (esp. Chapter 5), Quarfood 2014, as well as Watkins 2017.

"determining (or ontological) force" and proposes that this mistake produces claims similar, but not identical to, the constitutive principles M* and T* (173). Though I am largely sympathetic to Quarfood's depiction of the antinomy, one might still wonder, Why does the dialectical error include claims that Kant does not explicitly write out? This would seem to fly in the face of his deliberately writing out two sets of claims and warning us not to confuse the principles of reflection for the principles of determining judgment. We may also wonder, is there a more specific way to characterize the error involved in mistaking one for the other?

Surely, the error in reasoning here must be something like the dialectical inferences of pure reason of the *Critique of Pure Reason*. There, Kant writes,

> Now at least the transcendental (subjective) reality of pure concepts of reason rests on the fact that we are brought to such ideas by a necessary syllogism. Thus there will be syllogisms containing no empirical premises, by means of which we can infer from something with which we are acquainted to something of which we have no concept, and yet to which we nevertheless, by an unavoidable illusion, give objective reality. In respect of their result, such inferences are thus to be called **sophistical** rather than rational inferences. (A339/B397)

The dialectical errors of the Transcendental Dialectic consist of a particular kind of bad inference. The ideas of reason have a "transcendental (subjective) reality;" we have "no acquaintance with an object that corresponds to an idea" (A339/B397). Despite this, an unavoidable illusion tempts us to infer from the subjective reality of an idea of reason to its objective reality. The culprit behind dialectical errors is a "sophistical inference." Sophistical inferences of reason tempt us to infer the objective reality of the ideas of reason from the fact that we can conceive of these ideas.

On my reading, the error involved in the Antinomy of Teleological Judgment is a special kind of sophistical inference that is uniquely suited to the reflecting power of judgment – the error here is a sophistical *inference from analogy*. An inference from analogy is a species of "assent"

(*Fürwahrhalten*)[49] that is unique to reflecting judgment. Kant defines an analogy as "the identity of the relation between grounds and consequences (causes and effects), insofar as that identity obtains in spite of the specific differences between the things or those of their properties that contain in themselves the ground for similar consequences (i.e., their difference in outside relation)" (*CPJ* 5:464n). Kant immediately offers an example, comparing the artistic activity of a human being to that of an animal.

> [I]n comparing the artistic actions of animals with those of human beings, we conceive of the ground of the former, with which we are not acquainted [*den wir nicht kennen*], through the ground of similar effects in human (reason), with which we are acquainted [*den wir kennen*], and thus an analogue of reason, and by that we also mean to indicate the ground of the artistic capacity in animals, designated as instinct, is in fact specifically different from reason, but yet has similar relations to the effect. (*CPJ* 5:464n)

Between the animal and the human being we see a similarity in the structure of causality at work. On the one hand, a human being's concept of a house grounds their construction of the finished product. On the other hand, when we watch a beaver build a dam, we reason that its process is similar to ours – it takes something like a representation of the dam as the ground of its activity and constructs the dam in accordance with that representation. In both cases, a similar form of causality is at work. However, we must be careful about the inferences we are warranted in drawing on the basis of this comparison, for "from the fact that the human being uses **reason** in order to build, I cannot infer that the beaver must have the same sort of thing" (ibid). This would constitute an illegitimate inference since we have no acquaintance with the ground of artistic action in animals. In contrast, "we can rightly infer **in accordance with the analogy** that the animals also act in accordance with **representations** (and are not, as Descartes would have it, machines), and that in spite of their specific difference, they are still of the same genus as human beings (as living beings)" (ibid). Kant adds that such an inference is authorized because there is equal reason – "*par*

[49] Guyer and Mathews translate this term as "affirmation" in the text.

ratio" – for counting humans and non-human animals as members of the same genus as human beings – i.e., they are both terrestrial living beings.

Beyond the specific mistake referenced above, Kant has more to say about the character of *bad* inferences from analogy. Another example of a bad inference from analogy consists in inferring that, since human beings use the faculty of understanding in their "artistic action", a supreme world-cause must have this faculty, as well. In this case, we lack *paritas rationis* for considering the highest being and a human being as part of one and the same species. The human and a superhuman entity are fundamentally distinct in kind. In the context of explaining why the existence of God cannot be proven on the basis of an inference from analogy, Kant writes, "from the fact that among beings in the world the cause of an effect that is judged as artistic has to be attributed to intelligence we can by no means infer from analogy that the very same causality we perceive in humans must also pertain to the being who is entirely distinct from nature in regard to nature itself" (*CPJ* 5:465). Because the two beings compared in the analogy are different in kind, I cannot infer that a property of one belongs to the other.

The dialectical error in the Antinomy consists in a bad analogical inference, one that speciously attributes a property of one mode of judging to a mode of judging that is distinct in kind. Since reflecting and determining are two powers of judgment – both, roughly, tasked with subsuming particulars under universals – we are tempted to believe we have equal reason to apply the principles of the one to the other. As a result of this temptation, we "transform" the principles of reflection represented by M and T into corresponding principles of determining objects in M* and T*. However, Kant is at pains in the Dialectic to remind us that, like our causality and that of a supreme world-cause, reflecting and determining are importantly distinct in kind. Reflecting is *autonomous*, seeking out principles on its own, while determining is *heteronomous*, having

principles handed to it by another faculty. Thus, despite the temptation to slide from M to M* or T to T*, we must resist the urge to think that principles of reflection can determine nature.

As I have mentioned, this interpretation does not necessarily conflict with the camp of readers that locate the antinomy at the level of the maxims, but spells out the necessary first step we must take before even addressing the antinomy. That is, before addressing the antinomy, we must locate and avoid a dialectical error of judgment that tempts us to infer that reflecting principles of judgment can be determinative. As is the case in the Transcendental Dialectic of the *First Critique*, the Dialectic of the *Third* warns us of a specious inference we can be tempted to, but should not, make. Yet, the specious inference in the third *Critique* is not an inference of reason; it is an inference of the power of judgment. As a mode of inference that is special to the power of judgment, inference according to analogy is the appropriate mistaken inference in this context.[50] Now that we have a better sense of what the dialectical error involved in the Antinomy is, we can turn to Kant's remarks on how not to resolve the antinomy.

2. Sections 72-73: How not to solve the antinomy

In sections 72-73, Kant surveys various dogmatic proofs of purposiveness in nature. Some philosophers have attempted to justify the inference that all that we judge to be teleology really is just mechanism on the basis that their preferred methods of reflecting on nature reduce it to a merely mechanistic cause. Other philosophers infer that our ability to judge nature in accordance with ends allows us to prove the existence of teleology and teleological properties in nature. The first group Kant calls "idealists" and the second group "realists" about natural ends. Both camps fall prey to the erroneous form of analogical inference described above.

[50] Besides the Methodology of the *Critique of the Power of Judgment*, Kant also discusses inference from analogy as a mode of inference of the power of judgment in his *Lectures on Logic*. See, for instance, §84 of the *Jäsche Logik*.

Idealists seek to prove that the purposiveness of nature is "at bottom entirely identical with the mechanism of nature" (*CPJ* 5:391). Kant surveys and rejects two forms of idealism. The first, associated with the atomistic theories of Epicurus and Democritus, contends that the purposiveness of nature is wholly accidental. Products of nature that appear to betray a purposiveness merely come about as a product of blind chance, and as a result "nothing is explained, not even the illusion in our teleological judgments" (*CPJ* 5:393). We might say that this doctrine, which purports to have explained that the universe is nothing but the result of the collision of infinite many material atoms in an infinite void, explains nothing. While the collision of atoms might give us an account of why things have the structure that they do, they cannot explain why the universe came to have this particular structure and not some other one.[51] The other form of idealism grounds the purposiveness of nature in a "lifeless God." Kant associates this view with Spinoza. The view seeks to explain the connection of ends in the things in nature by making them out to be the product of a "blind necessity". In doing so, this view fails to provide a principled distinction between purposive things and non-purposive things, instead giving us a "merely childish game played with words" (*CPJ* 5:394). Spinoza's doctrine of a lifeless God does not even seem to be worth entertaining as a reflective standpoint, to Kant, as it is fundamentally incoherent.

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[51] See the *Letter to Herodotus* for Epicurus's basic principles of physics, which states that there is no principles of compound bodies except atom and void (see Epicurus DL 10.39ff, translated by Inwood and Gerson, p. 6).

To be sure, Epicureans later introduce the notion of the swerve as an attempt to give an account of the contingent structure of nature. Rather than moving in a straight line as a result of some previous collision, some atoms randomly and unexpectedly swerve. Cicero counters that such a doctrine is *ad hoc* and ineffective:

> For if all atoms swerve, none will ever cohere in a compound; but if some swerve and some move properly by their own impetus, this will amount, first of all, to assigning different spheres of influence, so to speak, to the atoms, some to move straight, others to move crookedly; and second, that very same confused concourse of atoms (and this is the point which Democritus too had trouble with) will not be able to produce the orderly beauty of this world. (Cicero, *On Goals* 1.20, translated by Inwood and Gerson, p. 46)

If all atoms swerve, none would collide and no compounds would come about. If some atoms swerve, then those swerves must be caused by some influence, meaning that they are not spontaneous as Democritus and Epicurus thought, or, they are not influenced by some previous cause, meaning that they ultimately cannot explain "the orderly beauty of this world." Cicero, it turns out, offers us a more thorough version of Kant's critique of Epicurean "idealism."

For an illuminating discussion of Kant's ever-evolving relationship with Epicurean physics, see Catherine Wilson's "The Building Forces of Nature and Kant's Teleology of the Living" (2017).

Next come the "realists" about the purposiveness of nature, who seek to build the purposiveness of nature into matter. First are the hylozoists, who assert that life is a property of matter (i.e., *zoe* is in *hule*). This is a fundamentally incoherent position, for matter is by definition inert and dead. Kant proves as much in his argument for the Second Law of Mechanics. Then come the Theists, which comes closer to the truth than some of the other views, However, the dogmatic Theist seems to believe that they can establish the existence of God in a way "sufficient for the determining power of judgment" (*CPJ* 5:395). While positing an intentional God behind nature might be an adequate ground for reflecting on the purposiveness of nature, it is not a ground for justifying the purposiveness of nature as a "objective assertion." Thus, Theism promises to deliver more than it can, sliding from a maxim suitable for reflecting on nature to an objective proof of the existence of God.

As McLaughlin (1990) has observed, Kant has no problem sliding from claims about nature as a whole to claims about particular products of nature – i.e., organisms – in these sections. On the face of it, this might not seem like an issue. We can simply translate some of the errors characteristic of judgments about *the whole of nature* to considerations about the correct ways to judge *particular natural products*. However, if we consider options for conceiving of organisms that are not neatly mapped out here, Kant might run into issues. One such position that may pose an issue for Kant is Aristotle's doctrine of the organism, as it is developed in *De anima*. Kant never mentions Aristotle or Aristotelians anywhere in the body of the third *Critique*, including the Antinomy. On top of that, none of the positions in these sections neatly describe Aristotle's picture of the organism. Aristotle's view could perhaps be grouped under the "realist" camp, insofar as it assumes, like other realist positions, "that the productive capacity of nature in accordance with final causes must be held to be a special kind of causality" (*CPJ* 5:391). (Indeed, if this is an idea

that the realist subscribes to, it would seem as though Kant is more sympathetic to the realist than to the idealist, who clumsily attempts to collapse the concepts of purposiveness and mechanism.) Nevertheless, with respect to the organism, Aristotle is neither a hylozoist nor a Theist. Aristotle's distance from theism is obviously clear – he does not posit a God as the source of an organism's generation and activity. Rather, the purposiveness of the organism is the result of a natural organic body's possession of an *entelecheia* (a first actuality) (*DA ii* 1, 412b5).[52] While this may tempt someone to attribute a hylozoism to Aristotle, he is quite adamant that the *entelecheia* animating a natural organic body *is not a property of matter*. Instead, it is a form that structures and animates, but is not reducible to, the material body with which it is coupled. In short, Aristotle is not a hylo*zoist*; he is a hylo*morphist*. An organism is a particular compound of matter and form – the body being the matter that a soul, its form, endows with a certain organization (*logos*) (*DA ii* 1, 412b15ff.). Without getting into the thorny details of how to interpret Aristotle's hylomorphism in general and its application to the soul-body compound in particular, it seems sufficiently clear that the life of an organism is not reducible to what Kant would call mechanism, not reducible to a property of matter, and not built into creatures by God.

Now, Kant might say that Aristotle's view on the organism is suspect because it falls prey to the dialectical illusion at work in the antinomy, mistaking a maxim for reflecting upon organisms for a principle constitutive of objects in nature. Kant would flatly reject any such slide, as 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)" (*CPJ* 5:396). Of course, to prove that Aristotelian hylomorphism falls prey to the

[52] For a helpful discussion of what this might mean, see Shields 2017, Section 2. I develop reasons for suspecting that, depending on our reading of Aristotle, Kant either neglected Aristotle's teleology or develops a teleology sympathetic to Aristotle's in Appendix II directly below.

dogmatic fallacy of mistaking a concept that guides our reflection of nature for a concept of determining judgment, the objective reality of which can be proven, would require a separate argument by Kant. Such an argument is simply lacking in sections 72-73 of the Dialectic.[53]

3. Sections 74-75: A critical inquiry into the limits of judgment

If the main error of the Dialectic consists in mistakenly inferring that a principle of reflection can be involved in determining nature, only a thorough critique of reflecting and determining allows us to appreciate why this inference is mistaken by revealing the deep differences in kind between these two modes of judging. Appropriately, Kant opens section 74 by reiterating the difference between dogmatic and critical treatments of nature. A critical treatment of a concept considers it only in relation to our cognitive faculties, "without undertaking to decide anything about the object" (*CPJ* 5:395). A dogmatic treatment, which is associated with the determining power of judgment, presupposes the objective reality of a concept in order to subsume intuitions under that concept (*CPJ* 5:396). Kant here focuses his efforts on showing that the objective reality of the concept of a natural end cannot be proven, and hence the purposiveness of nature cannot be treated "dogmatically."

The concept of a natural end is not one that can be proven to have objective reality. On the one hand, this concept "is possible only under certain conditions given in experience" (*CPJ* 5:396), meaning that it cannot be a condition for the possibility of experience, and its objective reality cannot be demonstrated, since only concepts that serve as a condition for the possibility of experience can be proven objectively real. Because its objective reality cannot be demonstrated,

[53] For more on how Kant might be receiving Aristotle's teleology in the third *Critique*, see Appendix II.

this concept can never be treated "dogmatically for the determining power of judgment", and it is "merely regulative for the reflecting power of judgment" (*CPJ* 5:396).

Kant takes the claim that the concept of an organism is not demonstrable to be reinforced by the fact that "the concept of a **natural product**" is, paradoxically, both necessary (reason compels us to think this concept) and contingent (the laws of mechanics cannot explain why a product judged as a natural end has the organization that it does). Recalling Kant's example of the structure of a bird from the first section of the Critique of the Teleological Power of Judgment could be helpful here.

> For if one adduces, e.g., the structure of a bird, the hollowness of its bones, the placement of its wings for movement and its tail for steering, etc., one says that given the mere *nexus effectivus* in nature, without the help of a special kind of causality, namely that of ends (*nexus finalis*), this is all in the highest degree contingent: i.e., that nature, considered as a mere machine, could have formed itself in a thousand different ways without hitting precisely upon the unity in accordance with such a rule (*CPJ* 5:360).

This contingent unity of a bird can only be explained by appeal to a purposive causality that artfully arranges the bird's parts in the manner described above. Crucially, the bird is still an object of outer sense, subject to and necessitated by the Laws of Mechanics. Because these Laws are universal in scope with respect to objects of nature, Kant must posit a source *outside* of nature for the non-mechanistic causality that explains the contingent structure of a natural product: "it must contain a basis for the possibility of this thing in nature and yet at the same time a basis of the possibility of this nature itself and its relation to something that is not empirically cognizable nature (supersensible) and thus is not cognizable at all for us, in order to be judged in accordance with another kind of causality than that of the mechanism of nature" (*CPJ* 5:396). The concept of a natural end therefore points us to something that is at once in nature and beyond nature, at once cognizable and un-cognizable. Owing to the fact that it refers to a supersensible, un-cognizable basis of its possibility, the concept of a thing as a natural end is "excessive **for the determining**

power of judgment" and "it cannot be provided with objective reality for determining judgments" (*CPJ* 5:396-7). At this juncture, Kant issues us a reminder: even though this concept is "immanent for the reflecting power of judgment with regard to objects of experience", we cannot employ this concept to "decide anything" about nature and its products (*CPJ* 5:397). The concept of a natural end may serve as a principle of reflecting judgment, and this may tempt us to infer that it can serve as a principle of determining judgment, as well. Moreover, this temptation may be heightened by the fact that "The concept of a causality through ends (of art) certainly has objective reality, as does that of a causality in accordance with a mechanism of nature" (*CPJ* 5:397). Nevertheless, we must resist the temptation to infer, from this basis, that the concept of a natural end can be demonstrated to have objective reality:

> the concept of a causality of nature in accordance with the rule of ends, even more the concept of a being the likes of which is not given to us in experience at all, namely that of an original ground of nature, can of course be thought without contradiction, but is not good for any dogmatic determinations, because since it cannot be drawn from experience and is not requisite for the possibility of experience its objective reality cannot be guaranteed by anything. (*CPJ* 5:397)

Lacking a surefire means of drawing this concept from experience or treating it as a possibility of experience, the concept of a purposiveness in nature can have no objective reality.

With this set-up in mind, an important ambiguity and an opportunity to clarify Kant's intended position are afoot. On the one hand, he thinks that we cannot prove the objective reality of this concept, but seems to suggest that our experience of nature in some sense elicits the formation of the concept of the organism. In the Analytic, Kant states that "Experience leads our power of judgment to the concept" of a natural end (*CPJ* 5:366) and that the principle stating that an organized product of nature is a natural end is "derived from experience, that is, experience of the kind that is methodically undertaken and is called observation" (*CPJ* 5:376). In the Canon of the first *Critique*, we even see Kant claim that , "purposive unity is still so important a condition

of the application of reason to nature that I cannot pass it by, especially since experience liberally supplies examples of it" (A826/B854). Despite the concept's lack of objective reality and our inability to apply it to nature dogmatically, Kant says, again and again, that something about experience *suggests* the presence of this concept in nature. I want to flag this because I believe that it provides the grounds for qualifying Kant's claims about the organism's lack of objective reality. The existence of an organism can never be established by means of empirical cognition. Nevertheless, experience suggests that the causality characteristic of it organizes certain natural products, and, as the remainder of the Dialectic will show, we certainly have an interest in imputing this sort of purposiveness to nature.

Though I fully turn my attention to the question of how exactly we should treat Kant's claims about the mere ideality of the organism later, for now I clarify that one of my goals here is to chart a middle ground between two extremes. Commentators often make Kant's remarks about teleological judgment out to be too thin. They assert that teleological judging merely projects a certain concept onto nature, but that the state of affairs or object we are projecting is a fiction. In other words, these commentators think that, because we cannot determinately judge that there are organisms, we either cannot say or must deny that there are organisms. These commentators are right to insist that, on Kant's account, we can never determinately judge that there are organisms. However, our attitude towards the existence of the organism should be thicker than a mere projection that licenses nothing stronger than an agnosticism. As the passages above and the arguments of the next chapter show, certain particulars present themselves to us in such a way that is jarring, creating a need for a new concept or mode of judging to explain their organization and activity. For this reason, we should seek an alternative that is not quite as robust as determining judgment, but not quite as thin as a mere projection. Later, I develop that middle ground by

proposing that we conceive of our attitude towards the existence of the organism as a kind of theoretical belief.

Setting this matter aside and returning to the text, in section 75, Kant reinforces the point that I cannot mistake the maxims of reflecting judgment for principles of determining judgment with respect to the concept of the objective purposiveness of nature in general. Due to the "**peculiar constitution of my cognitive faculties** I cannot judge about the possibility of those things [natural products] and their generation except by thinking of a cause for these acts in accordance with intentions, and thus by thinking of a being that is productive in accordance with the analogy with the causality of the understanding" (*CPJ* 5:398). To say that I cannot help but judge nature this way given the "peculiar constitution of my cognitive faculties" is not to venture an objective principle for determining judgment but is merely to state a subjective maxim for reflecting judgment that is prescribed to it by reason.

Nevertheless, Kant adds that it is necessary for us to subject nature to the concept of an intention if we hope to make progress in our empirical research of organisms. Also, by applying the regulative maxim T to nature as a whole, "we have been able to discover many laws of nature which, given the limitation of our insights into the inner mechanisms of nature, would otherwise remain hidden from us" (*CPJ* 5:398). Nonetheless, with respect to the use of the maxim applied to the whole of nature, the maxim T is "useful, but not indispensable". The maxim is in contrast "essential for" products of nature that seem organized in accordance with ends – i.e., organisms – because otherwise we could not explain how such objects come about in the first place.

Kant also suggests that explaining organisms teleologically is of the utmost importance because it serves as a gateway to preserving the possibility of an intelligent designer of nature. Representing something as a natural end, as Kant mentioned earlier and reiterates here, represents

the thing to us as contingent, not necessitated by the laws of mechanism. As such, Kant infers that organisms "constitute the best proof of the contingency of the world-whole," serving as the "common understanding" as well as the philosopher's "best basis for proof" of the fact that organization and origin of natural things can be tied to an intelligent designer existing outside the world (*CPJ* 5:399). It is for this reason that "teleology cannot find a complete answer for its inquiry except in a theology."

At this juncture, Kant again warns that we cannot infer from the necessity of applying the regulative maxim T that it can be transformed into a constitutive principle for determining that the generation of some things is not possible in accordance with merely mechanical laws (T*). All that the necessity of applying T to organisms shows is that "because of the peculiar constitution of our cognitive faculties, and thus the combination of experience with the supreme principles of reason, we cannot form any concept at all of the possibility of such a world except by conceiving of such an intentionally acting supreme cause" (*CPJ* 5:399). When Kant refers to the supreme principles of reason, he likely has the tandem of principles from *Critique of Pure Reason*'s Transcendental Dialectic in mind – namely, "to find the unconditioned for conditioned cognitions of the understanding" (A307/B364) and its corresponding assumption that "when the conditioned is given, then so is the whole series of conditions subordinated one to the other, which is itself unconditioned" (A307-8/B364). Of course, it may be controversial to import the principles here, considering that we are not presented with organisms as "conditioned cognitions of the understanding." Still, Kant states that we represent the existence or form of certain things as the condition of an end; presumably, under that merely regulative assumption, it makes sense to seek out the end that has conditioned the thing, then the end that has conditioned that, and so on and so forth until arriving at the ultimate, unconditioned end of an "intentionally acting supreme cause."

Tracing back this final causal chain will never establish an objective proof of the existence of an intelligent original being, but it will serve the power of judgment in its reflection upon nature, allowing it to explain the seemingly purposive and contingent structure of organisms.

Ultimately, we must remember that "we do not actually **observe** ends in nature as intentional, but merely **add** this concept as a guideline for the power of judgment in reflection on the products of nature" (*CPJ* 5:399). The involvement of an intentional cause of natural ends would be something supersensible, lying beyond the limits of nature. Keeping this in mind allows us to ward off the specious inference, drawn on the basis of an analogy between our two distinct modes of judging, that a subjective maxim which states that some things in nature are judged only to be possible in accordance with a final causality can be transformed into a determining principle which states that organisms are only possible by dint of an intentionally acting cause in the world. All that we are left with is the "restricted formula" that we cannot conceive of organisms "except by representing them and the world in general as a product of an intelligent cause (a God)" (*CPJ* 5:400).

With this restriction in mind, Kant reiterates the mechanical inexplicability of organisms: "it is quite certain that we can never come to know the organized beings and their internal possibility in accordance with merely mechanical principles of nature", and so it would be absurd to hope for a "Newton who could make comprehensible even the generation of a blade of grass according to natural laws that no intention has ordered" (*CPJ* 5:400). Mechanical laws can never explain the contingent structure of an organized being. Still, the mechanical inexplicability of products of nature does not license "any objective judgment at all, whether affirmative or negative, about the proposition that there is an intelligently acting being as world-cause…at the basis of what we rightly call natural ends" (*CPJ* 5:400). Instead, we have only the conditional, regulative

maxim that *if* we are to judge the origin of natural ends within the limits of our, peculiar cognitive capacities, *then* we can only explain the possibility of these natural ends as emanating from an intelligent being. In the next chapter, I explain that the mechanical inexplicability of organisms has important *theoretical and moral* ramifications. For now, Kant has more to say about the peculiarity of our cognitive capacities and the limits they impose on us in the following two sections of the Dialectic.

4. Sections 76-77: On the special character of the understanding

In section 76, Kant launches into a digression concerning the difference between reason and the understanding as well as the special character of human understanding. On the one hand, reason demands the unconditioned. On the other hand, the understanding is stuck in the sublunary realm, working on material that is given to it in intuition. As a result, concepts of the understanding can (indeed, must) be made objectively real, while reason's concepts (God, the soul, freedom) cannot be proven objectively valid in the same way. The understanding cannot "keep up with" reason, but it helps us appreciate the fact that the ideas of reason are valid for all members of the human species, that "given the nature of our (human) cognitive faculty or even the concept that **we can form** of the capacity of a finite rational being in general, we cannot and must not conceive otherwise" than in the form of ideas of reason that can never be presented to us in experience (*CPJ* 5:401).

After this discussion of the differences between understanding and reason, Kant abruptly reminds us that "It is absolutely necessary for the human understanding to distinguish between the possibility and the actuality of things" (*CPJ* 5:401). Because of the nature of our cognitive faculties, which involve two heterogenous elements in sensibility and the understanding, we

cannot confuse these two forms of modality. Concepts of the understanding disclose the possibility of some object while sensible intuitions present us with an actual object. It is never the case that in thinking objects we can make them actual or have an intuition without having any concept of it, and this is merely a symptom of our peculiar cognitive constitution: "the distinction of possible from actual things is one that is merely subjectively valid for the human understanding, since we can always have something in our thoughts although it does not exist, or represent something as given even though we do not have any concept of it" (*CPJ* 5:402). For human understanding, then, it is impossible to derive the actual from the possible (i.e., to bring something into existence by merely thinking it). Of course, we can conceive of an understanding to which this distinction does not apply, one for which all the objects it thinks exist and the non-existence, or contingency, of an object would be impossible to represent. In our current case, however, "we should conceive all objects in accordance with the subjective conditions for the exercise of our faculties necessarily pertaining to our (i.e., human) nature" (*CPJ* 5:403).

Having applied this same lesson regarding the limitations of our cognitive capacities to the practical side of his story, Kant applies it to the topic of the current Dialectic: "it may be conceded that we would find no distinction between a natural mechanism and a technique of nature, i.e., a connection to ends in it, if our understanding were not of the sort that must go from the universal to the particular, and the power of judgment can thus cognize no purposiveness in the particular, and hence make no determining judgments, without having a universal law under which it can subsume the particular" (*CPJ* 5:404). Here, our understanding is not just taken to be limited to conceiving of the possible and not the actual; it is also the case that the understanding proceeds from the universal to the particular. Because the understanding must proceed in this way, it distinguishes natural mechanism from the technique of nature; a natural mechanism being the sort

of thing that can be determined according to a universal law of the understanding while the technique of nature cannot. Lacking a universal under which we can subsume a connection of ends in nature (e.g., a determinate concept of the organism) we can never cognize such a connection. However, we still encounter contingency in the particular (consider Kant's many remarks about nature and experience furnishing us with examples of organisms discussed above). In the face of this contingency, which the universal laws of mechanism cannot explain, "reason nevertheless still requires unity". Because this unity cannot be found by means of subsuming a particular under a given universal and reason places an unconditional requirement on us to impose unity, it is *necessary* for the human power of judgment to apply the purposiveness to the products of nature (*CPJ* 5:404). This subjective principle of reason – presumably, the principle T, that it is some products of material nature cannot be judged as subject merely to mechanical laws – is therefore "just as necessarily valid for our **human power of judgment** as if it were an objective principle" (*CPJ* 5:404), as our faculty of reason *demands* unity even when we cannot subsume a particular under a given universal.

It is worth noting that the necessity of this regulative principle for our human power of judgment makes this principle seem "as if it were an objective principle." The necessity of this maxim could be another reason why we are tempted to infer that it is constitutive of nature and not regulative. Nevertheless, having clarified that our human understanding cannot produce the actual from the possible and is limited to proceeding from universal to particular, Kant assures us that the maxim T cannot ever be interpreted as a constitutive principle of determination. Unable to explain the radically contingent structure of an organism, we seek the aid of reason in commissioning an appropriate maxim for grasping the unity of such a structure; but merely conceiving of such a structure as possible does not make it actual.

On this point, Kant opens section 77 by likening the concept of a natural end to an idea of reason; just as the objects of ideas cannot be given in experience, neither can the cause of the possibility of a natural end be presented to us in experience (*CPJ* 5:405). Importantly, while the cause of such a product is outside of nature, "the consequence that answers to it (the product) is still given in nature" (*CPJ* 5:405). Because the consequence of an end-directed activity is given in nature it seems tempting to make the idea of a natural end a constitutive principle of nature – that is, to say that there actually are some things the generation of which is not possible in accordance with merely mechanical laws. Still, Kant insists, even though the object we judge to be an organism is "given in experience", "it cannot even be **determinately** (let alone completely appropriately) **judged** in accordance with the idea, but can only be reflected upon" (*CPJ* 5:405).

Kant's resolution to the antinomy amounts to a demonstration that the regulative maxims are necessary for our investigations of nature, cannot be mistaken for principles of determining judgment, and are ultimately compatible with one another. The key to understanding why they are not only compatible, but both indispensable for our investigations of nature, is tied to Kant's discussion of the non-discursive understanding. When presented with an object, our understanding can explain it "as a product of the parts and of their forces and their capacity to combine themselves (including as parts other materials that they add to themselves)", representing the thing as mechanically generated (*CPJ* 5:408). In other words, when presented with an object, we explain its structure and generation by appealing to external causes – the material forces and changes that brought about the current state of the thing. On the basis of such an explanation, "there arises no concept of a whole as an end, whose internal possibility presupposes throughout the idea of a whole on which even the constitution and mode of action of the parts depends" (*CPJ* 5:408). Indeed, to consider a thing an organism we need to judge it teleologically, and teleological

explanations and mechanical explanations are two modes of explanation that are necessarily distinguished by the nature of our understanding. While it is possible that a body we deem to be an organism really is just mechanically generated, for the time being, we cannot justifiably regard material beings as things in themselves. Mechanical explanations and teleological explanations can exist side by side because things in themselves are not merely material things and we are capable of attributing a non-mechanistic causality to the "substratum" underlying material things:

> But since it is still at least possible to consider the material world as a mere appearance, and to conceive of something as a thing in itself (which is not an appearance) as substratum, and to correlate with this a corresponding intellectual intuition (even if it is not ours), there would then be a supersensible real ground for nature, although it is unknowable for us, to which we ourselves belong, and in which that which is necessary in it as object of the senses can be considered in accordance with mechanical laws, while the agreement and unity of the particular laws and corresponding forms, which in regard to the mechanical laws we must judge a as contingent, can at the same time be considered in it, as object of reason (indeed the whole of nature as a system) in accordance with teleological laws, and the material world would thus be judged in accordance with two kinds of principles, without the mechanical mode of explanation being excluded by the teleological mode, as if they contradicted each other. (*CPJ* 5:409)

It is conceivable that things in themselves are not material things. Moreover, it is conceivable that the supersensible real ground of nature, which is unknowable to us, could only be understood by means of an "intellectual intuition" – or the representation of a non-discursive understanding, which is at once actual and possible, at once universal and particular, and so forth. Whereas objects of the senses would be subject to mechanical laws, "the agreement and unity of the particular laws and corresponding forms" would be objects of reason judged in accordance with teleological laws.

By separating the material, mechanically generated perspective on objects from the contingent, teleologically governed perspective on objects laid out about and appreciating that caveat that some understanding unlike our human understanding could conceivably behold the latter, Kant claims to have established that both maxims of reflecting judgment can subsist

alongside one another. Moreover, though it may be possible to mechanically explain purposive products of nature, that does not make the teleological principle of judgment dispensable:

> one could investigate all the thus far known and yet to be discovered laws of mechanical generation in a thing that we must judge as an end of nature, and even hope to make good progress in this, without the appeal to a quite distinct generation ground for the possibility of such a product, namely, that of a causality through ends, ever being canceled out; and absolutely no human reason (or even any finite reason that is similar to ours in quality, no matter how much it exceeds it in degree) can ever hope to understand the generation of even a little blade of grass from merely mechanical causes. (*CPJ* 5:409-10)

From the perspective of the power of judgment, a "teleological connection of causes and effects" is necessary for conceiving of the possibility of organisms and for "studying [organisms] with the guidance of experience" (*CPJ* 5:410). The catch is that the ultimate cause of the generation of things we judge to be organisms can only be sought in the supersensible substratum, and the highest ground of any connection of final causes and effects can only be "an original understanding as cause of the world" (*CPJ* 5:410). Mechanical explanations allow us to explain objects as they appear to us up to an extent, but those things we judge to be ends of nature require us to appeal to a supersensible ground for their generation. Insofar as it is possible to think of that supersensible ground of the generation of organisms as teleological, teleological explanations can subsist alongside mechanical ones.

5. Section 78 (and beyond): Unifying mechanism and teleology

The point of section 78, the final section of the Dialectic, is ostensibly to reiterate that teleology without mechanism is mere "enthusiasm" and mechanism without teleology is "fantastic." On the one hand, "no insight into the nature of things can be attained" if we abandon mechanical explanations of the products of nature. Assuming that an intelligent cause designed nature's laws and products does not advance our "cognition of nature" – we can neither cognitively

grasp the possibility of an intelligent designed *a priori* or *a posteriori*. The former route would require a specious leap from conceiving of the possibility of such a designer to positing its existence; the latter route resorts to tautological reasoning and seduce reason into "poetic enthusiasm" (*CPJ* 5:410).

On the other hand, reason *must* still conceive of some natural products as generated by a causality in accordance with ends. Nature "obviously displays an intentional unity of purpose" that we grasp by stating that certain products in it are organisms. Though the question of how organisms arise in the first place is one that reason compels us to pose, it is *necessary* for us to "conceive of a particular kind of causality for it that is not, unlike the mechanism of natural causes, found in nature" (*CPJ* 5:411). As far as objects in nature are concerned, judgment must employ its mechanistic maxim, handed to it by the understanding and not venture to explain their material composition teleologically; still, if teleology is excluded from out investigations of nature, reason will be made "fantastic" and sent "wandering about among figments of natural capacities that cannot even be conceived" (*CPJ* 5:411). That is, even if the rational maxim that some objects can be judged according to a purposive is limited and must be deployed carefully, there is still some "proper occasion" (*CPJ* 5:387) in which to deploy the maxim that some products of nature cannot be judged as possible according to merely mechanical laws.

While each of these maxims have their proper domain, Kant denies that they can be united "in one and the same thing in nature" and treated as "dogmatic and constitutive principles of insight into nature for the determining power of judgment" (*CPJ* 5:411). Here, Kant discusses the example of the generation of a maggot. If I study the maggot as an object of the senses and explain its generation as the result of mechanical laws, I cannot conceive of it as produced by a causality in accordance with ends. Likewise, if I think of the maggot as a natural end, or as a thing that is both

cause and effect of itself (see §64 of the Analytic), I cannot "count on a mechanical mode of generation for it and take that as a constitutive principle for the judging of its possibility" (*CPJ* 5:412). To reflect upon the maggot as a product of mechanism excludes the constitutive principle that the maggot may have been generated in accordance with laws that are not merely mechanical; to reflect upon the maggot as an organism, or a thing that is the product of end-directed activity, excludes the constitutive principle that the maggot is only possible in accordance with mechanical laws.

Nevertheless, both principles of reflecting judgment M and T can be related to one and the same *supersensible* ground. Kant reaches this conclusion because he believes it is necessary that the principles of mechanism and teleology "cohere in a single higher principle" – "because otherwise they could not subsist alongside one another in our consideration of nature" (*CPJ* 5:412). Since he has excluded the possibility that these maxims mutually rest on a sensible ground in nature, the only available alternative is that they rest on a *super*sensible ground outside of nature. Unfortunately, since this uniting principle is beyond nature, it cannot ever be empirically cognized and proven as the *actual* cause of the cases we are studying, meaning that such a principle cannot provide us with legitimate explanations of a thing, as explanation gives us an account of the generation of some thing from given laws for the determining power of judgment. We cannot explain how or why these principles are based on a common supersensible ground "can by no means be explained" (*CPJ* 5:413). Kant reassures us that we should not be troubled by the fact that, when researching an object in nature, applying one regulative principle (e.g., T) excludes a firm assertion that the thing came about in accordance with an opposed set of constitutive laws (e.g., M*). For, if we keep in mind that the regulative principles we apply in our investigations of nature are *never* constitutive principles that determinately explain how these objects came about,

it is still possible that these two regulative principles can be unified in the common supersensible ground that all appearances presuppose.

Thus, the resolution to the Antinomy is in some sense a reminder of what Kant mentioned at the outset, in section 70. We *should* apply the regulative principle M when explaining the possibility and activity of an organism and try to take our research on the basis of this principle as far as we possibly can. However, there will be *some proper occasion* to deploy T to guide our investigations of nature. While the constitutive versions of these principles – M* and T* - can never be considered to subsist alongside one another, it is possible that their regulative versions – M and T – can rest on the same supersensible ground. This possibility ensures that the maxims stated at the outset "do not in fact contain any contradiction" (*CPJ* 5:387). It could be the case, for instance, that a designer manipulated the laws of mechanical generation to intentionally guide the creation of organisms and fashion the particular, otherwise contingent, laws of nature in accordance with which the world has come about.

What the final section of the Dialectic adds is a more specific account of the way in which M and T are compatible with one another. Mechanism and teleology subsist in a relationship of *subordination*: "the one (mechanism) can only be subordinated to the other (intentional technism), which, in accordance with the transcendental principle of purposiveness of nature, can readily be done" (*CPJ* 5:414). Here, Kant is elaborating on what it means to say that positing a teleological explanation of a thing does not exclude a mechanistic explanation of the thing. It is not the case that the former excludes the latter, as both explanations are compatible as long as they are employed as maxims, not constitutive principles. Applying a teleological principle in our judgments about natural objects does not exclude mechanism "because in a teleological judging of matter, even if the form which it assumes is judged as possible only in accord with an intention,

still its nature, in accordance with mechanical laws, can also be subordinated as a means to that represented end" (*CPJ* 5:414). When explaining why an animal reproduces, we might appeal to some end in accordance with which it behaves. The animal reproduces *in order to* preserve its species, and the preservation of its species is an end taken to be explanatory of its behavior. When fleshing out our explanation of why the animal aims to preserve its species, we might recruit a host of mechanistic causes – perhaps, we explain, the animal has been primed for survival by its environment, or perhaps nature selects for those animals that are fit for reproducing, or etc. However, "we also do not know how far the mechanical mode of explanation that is possible for us will extend, but are only certain of this much, namely, that no matter how far we ever get with that, it will still always be inadequate for things that we once recognize [*anerkennen*] as natural ends" (*CPJ* 5:415). What I take Kant to mean here is that, even if we posit some sort of natural mechanism that selects for those species most fit for survival, we can still raise a further question – i.e., *Why* would nature select only species that possess some traits and not others? Why does nature, in this case, privilege survival and not extinction?

Appealing to more mechanisms cannot stop this regress of "why" questions. This is precisely why, given the constitution of our faculties, "we *must* always subordinate all such mechanical grounds to a teleological principle" (*CPJ* 5:415, emphasis added). In our investigations of nature, we should always apply the mechanism of nature as far as we as possibly can in accordance with the general maxim M. But reflection upon certain products will lead eventually lead us to suspend M and posit T, as there are some products of and events in nature that "we can, in spite of those mechanical causes, subject to investigation only under the concept of an end of reason" (*CPJ* 5:415). For those products and events, an explanation appealing to mechanical causes "must in the end be subordinated to causality in accordance with ends" (*CPJ* 5:415). In a

sense, what Kant has also given us here is a glimpse into what exactly it means to say some of nature's products are mechanically inexplicable. For some products and events, an explanation appealing to mechanical causes will not stop the regress of why questions. The only thing that stops the regress is positing some ultimate end that, though we can never cognize, might shed some light on why nature is the way that it is. Indeed, as I shall explain in what immediately follows, it is the regress-creation of mechanism and the regress-stopping power of teleological explanations that licenses our subordination of mechanism to teleology.

6. On the mechanical inexplicability of organisms

In previous chapters, I have analyzed the concepts of purposiveness, the organism, the machine, and life and formulated the following interrelated interpretation of these terms.[54] Purposiveness is fundamentally a causality that takes inner principles as its grounds. The organism is a thing to which we attribute a particular kind of purposiveness – that is, an objective, real, internally purposive kind. In other words, an organism has an inner principle – its ends – and organizes itself and acts in accordance with those inner principles. Life, on my analysis, is most generically construed as the faculty of a substance to determine itself in accordance with inner principles. If my analysis is on the right track, this means that life is a substance's in-built faculty of purposiveness. Furthermore, if we judge something to be an organism, or to act in accordance with inner principles, it must have some capacity to act in accordance with those principles. That capacity is none other than life. A machine, in contrast to a living organism, is something that can only have external grounds of determination, and so it can be entirely explained by appeal to mechanistic laws of generation.

[54] See Chapters 1-3 directly above.

With these tools in mind, I want to offer a new account of the mechanical inexplicability of organisms – one that makes the mechanical inexplicability of natural products compatible with the claim that we must subordinate mechanism to teleology. On the one hand, mechanical explanation requires us to trace back antecedent changes in matter that externally determined a thing's current state of matter. On the other hand, an organism has life, or a capacity to determine itself in accordance with spontaneous internal grounds that do not, by definition, conform to the mechanical laws of generation. In what follows, my proposal is that, given the constitution of our cognitive faculties, mechanical explanations can never suffice for giving a complete account of the generation or the activity of an organism. For instance, when asking why a fig tree regrows its fruits once we have plucked them, tracing back the mechanical causes of the tree's regrowth does not stop the regress of "why" questions. Rather, only an appeal to an internal ground stops the regress. On my reading of Kant, the ultimate internal ground that determines a thing's organic activity is (what I call, following Bedau 1992) a value. The regress of "why" questions cease to a halt when we state that the fig tree regrows its fruit because regrowing fruit is conducive to its self-maintenance, and self-maintenance is something that, in some loose sense, has *value* for the fig tree. How this assessment differs from Peter McLaughlin's (1990) and builds upon Hanna Ginsborg's (2015) I explain below.

McLaughlin's view makes mechanistic explanation out to be a reduction or a decomposition of a whole to its parts. Marcel Quarfood (2004) gives us good reasons to suppose that this is too parochial an understanding of mechanism on Kant's account. Quarfood notes that mechanism was simply taken to be coextensive with the "the predetermination of every change by the preceding state" in Kant's 1790 *Progress* essay (2004, 200). Moreover, in the Metaphysical Foundations of Natural Science, Kant seems to criticize the reductionistic version of mechanical

philosophy McLaughlin apparently attributes to him: "This method, also called *Korpuskularphilosophie*, consists in explanations from "the constitution and composition of [the] smallest parts, as machines," and it appears to be the same corpuscularianism that McLaughlin, citing Robert Boyle, presents as an example of mechanism" (2004, 201; see McLauhglin 1990, 176). Owing to this rejection, Kant cannot be straightforwardly accepting of Boyle's conception of mechanism, as McLaughlin asserts. The conception of mechanism that is relevant here must be broader.

McLaughlin might point to section 77 of the Dialectic to argue that there, Kant seems to be suggesting that mechanism is associated with the discursivity of the understanding, and the discursivity of the understanding is characterized as an analysis of a whole by reducing it to its parts. In response to this, Quarfood insists that what is characteristic of a discursive understanding is that it thinks by means of abstract concepts of the understanding and depends upon data brought to it by intuition. According to McLaughlin, the intuitive understanding of section 77 only differs from a discursive understanding in that it can explain parts from wholes. It still, Quarfood says, "functions in accordance with the causal law (its holism being a species under the genus causality" (2004, 201). This reveals yet another reason why McLaughlin's depiction of the discursivity of the understanding as reflective of a certain whole-to-part reductionism cannot be right - it suggests that a contrasting "intuitive" understanding is merely that sort of understanding that proceeds in the opposite direction when explaining (i.e., from part to whole) but is still capable of using the concept of causality in doing so. However, Quarfood maintains that, for a non-discursive understanding, "causality (as based on a pure concept of the understanding) must be cancelled" (2004, 201). All of this suggests that McLaughlin's depiction of mechanism as whole-to-part

reduction is not the only means of framing Kant's claim that organisms are mechanically inexplicable.

Seizing on Quarfood's suggestion that the sense of mechanism here must be broader than McLaughlin suggests, I propose that we think of mechanistic explanations as providing an account of the external causes that precipitated some change in matter. For any object in spacetime, its current material state is the result of some prior, external state of matter. In contrast, a non-mechanistic explanation will not appeal to some prior material event to explain the current material state of an object. Instead, it will appeal to an *internal* principle of determination – something like a representation, a feeling, or, as I suggest below, a value. This covers cases of mereological explanation, as Kant's discussion of parts determining a whole also seem to appeal to those parts as material things subject to and producing external forces that affect other parts of the same material whole (see *CPJ* 5:408). But this characterization is broader than a mereological analysis because it can be construed etiologically, as well. External causes are material states that temporally precede other material states. Mechanism does not simply refer to a particular mereological causal relation. More generally, it pertains to a causal explanation that tells us how a thing came about as a result of being passively affected by some prior material influence. Mechanistic explanations exclude spontaneity from their ken.

Ginsborg offers a different account of the mechanical inexplicability of organisms that deploys a broader form of mechanism. According to Ginsborg, the mechanical inexplicability of organisms is a symptom of the fact that they exhibit regularities that cannot be explained by mechanism, and matter (or a material thing) is that which is by definition passive (or acted upon) and not spontaneous (capable of self-directed activity). As Ginsborg puts it, "The impossibility of accounting for the existence of organisms in terms of the workings of matter as such is due to the

extreme improbability that matter could have spontaneously arranged itself into structures with the requisite order and complexity" (2015, 301). Indeed, we might bring back considerations of Kant's analysis of the difference between the external principles impelling machines and the internal principles impelling life to make this claim even stronger: given the conceptual contrast between machines as driven by purely external causes and living things as driven by spontaneous, internal causes, it is not just *extremely improbable* that matter could have spontaneously arranged itself the way that a living organism seems arranged. More strongly, it would be inconceivable that matter could arrange itself in such a way. Matter is, by definition, dead, only propelled by external causes. In any case, matter cannot account for the "biological regularities" displayed by the workings of an organism (2015, 302).

Instead, Ginsborg suggests that the biological regularities exhibited by organisms come about as a result of its conforming to certain normative standards or rules. An immediate issue with Ginsborg's view is that it is unclear what it means for biological regularities to conform to normative standards. A more helpful model for the point Ginsborg is trying to make might be gleaned by running her view vis-à-vis Mark Bedau's grades of teleology in his 1992 "Where's the good in teleology?" Bedau adopts an evaluative approach to teleology, according to which teleology is fundamentally characterized and analyzed in terms of value (in a neutral sense of the term). Recall that Bedau distinguishes three grades of teleology along the lines of the explanatory role value plays in each. A teleological explanation has the following characteristic structure to Bedau: "A Bs in order to C iff A Bs and A's Bing contributes to Cing and Cing is good for A" (1992, 787). According to a "Grade 1" analysis of this statement, the fact that Cing is good for A plays no role in explainig why A Bs. A's Bing merely happens to bring about good consequences; "A's Bing is merely conjoined with its contribution to a good consequence" (1992, 789). To say

that Eric exercises in order to maintain good health only invokes good health as an accidental consequence of his exercising. Grade 2 takes the analysis of teleological explanation a step further insofar as it adds a crucial "because" to the form of explanation above: "A Bs in order to C iff A Bs because A's Bing contributes to Cing and Cing is good" (1992, 789). While this might seem to invoke the value of C as an explanatory ground, Grade 2 interprets the because as only scoping over A's Bing contributes to Cing", and not the second conjunct "Cing is good." Thus, while Grade 2 also appeals to good consequences and even adds that Eric exercises *because* it is conducive to his health, the goodness of health is still not explaining why he exercises. This leads to Grade 3 teleology. Here, the value of health is finally taken into account to explain why Eric exercises. According to Grade 3 teleology, value plays an essential role in explaining why A Bs. This, to Bedau, is “full-blooded” teleological explanation.

In light of Bedau's analysis, let us return to Ginsborg's claim that there are biological regularities that cannot be accounted for by appeal to changes in matter, but only by evaluating organic structures and activities as relative to some normative standard. On Bedau's analysis, the controversy regarding the presence of teleology in biological explanation pertains the Grade 3 only. That is, to the mechanist, it is not a scandal to admit that there are Grades 1 and 2 teleology in nature. Hearts make a sound when they beat in order for doctors to diagnose health conditions that a patient may suffer from, but we need not invoke values as explanatory to make this kind of explanation. Moreover, hearts pump blood because pumping blood contributes to circulating blood throughout the body, and circulating blood is good for the body. However, the good consequences of circulating blood do not explain why the heart beats. What would be controversial is the statement that heart's beat because they recognize that their beating is good for them (and the body of which they are a part).

Ginsborg's proposal that organisms are fundamentally subject to normative laws and constraints equivocates between these grades of activity, and so it presents a view that may not be inexplicable by the mechanist's lights after all. This equivocation is apparent in the examples Ginsborg chooses to motivate her view: "The regularity with which an acorn grows into an oak, or a heart circulates blood, is lawlike in so far as these processes conform to laws that acorns ought to (are meant to, are supposed to) grow into oaks, or that the heart ought to circulate blood. Regarding organic regularities as lawlike in this way requires that we regard organisms and their parts as subject to normative standards and constraints: and this is just what it is to regard them as purposes" (2015, 278). The problem with Ginsborg's view is that it is possible to "subject" these entities to normative standards and constraints in totally different ways. A heart can be subject to normative standards and constraints in a way that is teleological but does not offend or violate the endeavor to mechanistically explain it. Indeed, a Grade 2 analysis of why the heart pumps blood seems totally compatible with a mechanical explanation of the heart. A heart pumps blood because pumping circulates blood throughout the body and circulating blood happens to be what a well-functioning heart *ought to* do. But what a heart ought to do plays no role in explaining why the heart beats in order to circulate blood. In other words, the heart conforms to the normative standard of what it ought to be, but merely coincidentally. If we take Ginsborg to be saying that the mechanical inexplicability of an organism amounts to the claim that the mechanist cannot account for any grade of teleology, this claim seems off. After all, the mechanist can accept that the heart pumps blood because doing so circulates blood through the body and circulating blood happens to be good for the body. What the mechanist could not explain is the circulation of blood being good for the body determining the pumping of the heart.

The controversy surrounding an organism and its mechanical inexplicability does not merely have to do with the fact that its activity or regularity *happens* to conform to some normative standard or value. Rather, what is inexplicable in mechanistic terms is the suggestion that organisms have some good or value and that that good or value determines their activity or structure. To say that the organism is mechanically inexplicable is to say that the mechanist cannot explain why or how a normative standard or value genuinely explains the structure and the activity of an organism. In Bedau's parlance, organisms seem to possess a third grade of teleology, which would suggest that their workings are determined by the goodness (again, in a neutral, a-moral sense of "good") of some activity. A predator hunts in order to feed itself and its family, and feeding itself and its family is good for both. On a Grade 3 analysis, the goodness of feeding itself and its family explains why the predator behaves the way that it does, why it has the features that it does and not some others (a lithe but muscular body, sharp fangs, etc.), and so forth.

Ginsborg's account does not diagnose the sense in which value comes to bear on our analysis of the organism in precise enough terms, and because of this it does not quite explain what is mechanically inexplicable about the organism. In Bedau's manner of speaking, a genuine teleological explanation appeals to value as a way of explaining the activity and structure of a thing. In Kant's manner of speaking, this is to say that, for an organism, value serves as an *internal* cause of an organism's behavior and structure. Insofar as mechanists take the activities and structure of an organism to be the result merely of an antecedent state of matter, they cannot explain how the value of some activity brings about "biological regularities." Value, in its neutral, a-moral sense, is not a state of matter that precipitates some other change in matter. Furthermore, value appears to be just the sort of thing that can qualify as a spontaneous "internal" principle of purposive causality.

Bringing the explanatory framework developed by Bedau to bear on Kant's thesis that organisms are mechanically inexplicable gives us a new way of understanding the mechanical inexplicability thesis. The form and the activity of an organism is so puzzling to us because it is taken to be motivated by a *value*, where value is the immaterial, internal principle of an organism's structure or activity. To say that there will never be a Newton of a blade of grass is to say that the laws of mechanics could never explain how or why value can serve as an internal principle of an organism's activity and form. It is to say that the mechanist cannot account for the way in which value imposes unity on the world.

In this sense, mechanism is necessary but merely regulative because, on the one hand, explaining how nature and objects in it came to be requires us to trace back the series of external material causes that precipitated the current, material state of nature and natural products. On the other hand, organisms are mechanically inexplicable because, as far as we know, the mechanist cannot explain life. All the things we judge to be organisms are alive. Insofar as life is a capacity to act in accordance with inner principles and a mechanistic explanation proceeds by giving the external causes of some material state, mechanism cannot be constitutive of living phenomena.

To put this point plainly, consider the question "Why does a tree reproduce?" One route is to answer that the tree reproduces because material process within the tree caused it to sprout an acorn, and that process was itself initiated by some previous material state of the tree, and that material state of the tree was perhaps precipitated by a chemical reaction between the tree's roots and the soil, and so on. Notice that if we proceed along these lines, there will always be a prior external cause for some state – we can go on tracing the external-causal chain of the tree's reproductive activity *ad infinitum*. But the question "Why does the tree reproduce?" can be interpreted slightly differently, in such a way that stops a mechanist cannot answer, for "If the mere

mechanism of nature is assumed as the basis for the explanation of its purposiveness, then one cannot ask why the things in the world exist" (*CPJ* 5:434). The tree reproduces *in order to* maintain itself and its species, where the maintenance of itself and its species is taken to be, in some sense, the good of the tree. The mechanist cannot explain by what means the good of a tree arises or by what means the good of a tree causes reproduction. And it is in this sense that a tree is mechanically inexplicable.

Besides stopping a potential infinite regress of causes, defining mechanical inexplicability in terms of value allows us to better appreciate why it is *internally* purposive things that are mechanically inexplicable for Kant. The mechanist cannot give us an account of how values determine the activity of a thing from *within* it. The relevant values of the tree are not established relative to some other purposive agent (e.g., the birds living on it, the soil into which it digs its roots, and so on). They are values built into the tree, so to speak.

At this point, someone may worry that what I suggest here violates Kant's commitment to the Second Law of Mechanics. Nevertheless, the "why" questions I describe here only come about in the context of investigations of nature that take place in accordance with mere maxims of reflection. So, positing a value as the ultimate internal ground of an organism's activity does not guarantee that we will ever cognize that internal ground. This ground is not, and cannot ever be, given to us in outer sense. What this might give us a *theory* that suggests why organisms have the contingent structure that they do. Ultimately, admitting that organisms and their life are mechanically inexplicable does not violate this law of mechanics, though it shows us that, due to the constitution of our cognitive faculties, mechanical explanations will never stop the infinite regress of why questions an organism triggers. It is in this sense that the mechanical mode of explanation "will still always be inadequate for things that we once acknowledge as natural ends"

(*CPJ* 5:415); it is in this sense that "no human reason (or even any finite reason that is similar to ours in quality, no matter how much it exceeds it in degree) can ever hope to understand the generation of even a little blade of grass from merely mechanical causes" (*CPJ* 5:410).

7. Concluding remarks

Above, I have provided an outline of Kant's Antinomy of the Teleological Power of Judgment. Along the way, I have taken a stance on several key issues in the literature. For one, I endorse an interpretation of the Antinomy that characterizes the dialectical error as a bad analogical inference stating that the principles of reflecting judgment can be deployed in determining judgments on the basis that these two modes of judging are the same in kind. By attuning us to important differences between these two faculties, Kant is at pains to show that we are never licensed in inferring that the principles of reflection can be deployed in determining nature. I have also provided an interpretation of the mechanical inexplicability of the organism that builds on Hannah Ginsborg's, arguing that what is mechanically inexplicable is the organism's life, or its capacity to determine its activity in accordance with an internal ground of activity. Yet, perhaps most importantly given the aims of what is to come, I have been at pains to emphasize that Kant may deny that we can determinately judge that there are organisms, but, given the many situations in which Kant stresses that nature and experience furnish us with examples of organisms, we should not read him as stating that the organism is a mere fiction or projection on account of this denial. The goal of the next chapter is to answer one question: If we cannot empirically cognize organisms but they are something more than mere fictions or mental projects, what should our attitude toward the existence of organisms in nature be?

Chapter 6. Believing in organisms: Kant's non-mechanistic philosophy of nature

In the previous chapters, we have traversed Kant's texts to define core concepts, such as purposiveness, nature, organism, mechanism, and life. Equipped with our analyses of these terms as well as key portions of the third *Critique*, we are now finally able to respond to the mechanistic readers surveyed in the Introduction and Chapter 4. Recall that, traditionally, interpreters attribute to Kant the view that nature is determined by and completely explicable in terms of Newton's Laws of Mechanics. This tradition, which is anchored in the conception of nature developed in the Second Analogy of Experience in the *Critique of Pure Reason* as well as the Mechanics section of the *Metaphysical Foundations of Natural Science*, puts forward a *mechanistic* interpretation of Kant's doctrine of nature.

To these readers, Kant thinks that our mechanistic explanations of nature genuinely capture the structure of nature and natural products. *Moderate* mechanistic readers, claim that, since we cannot empirically cognize the causality characteristic of an organism, we cannot know that organisms exist.[55] Moreover, because we cannot know whether nature contains organisms, Kant encourages us to believe that mechanism can one day exhaustively explain nature.

Strong mechanistic readers take things a step further. Whether or not we can grasp the causality characteristic of them, the things we call organisms are presented to us as objects of empirical cognition. If something is an object of empirical cognition, then the laws of physics give us an exhaustive picture of what that object is and why it exists. If the laws of physics furnish us

[55] A representative sample includes Peter McLaughlin's (1990) *Kant's Critique of Teleology in Biological Explanation* and "Mechanical Explanation", Allen Wood's (1999) *Kant's Ethical Thought*, John Zammito's (1992) *The Genesis of Kant's* Critique of Judgment, Rachel Zuckert's (2007) *Kant on Beauty and Biology*, Hannah Ginsborg's (2015) *The Normativity of Nature*, and James Kreines's *Reason in the World*. We also see this reading come up in discussions of Kant's philosophy of history (see Yovel 1980).

with a picture of reality according to which objects are nothing but matter in motion, it follows that those things we judge to be organisms are nothing but matter in motion. In short, to the strong mechanist, Kant's philosophy leads us to the conclusion that *we can know organisms do not exist*.[56]

In general, mechanistic readings draw Kant's picture of nature closer to an Early Modern mechanistic one. It is either possibly or necessarily the case that all natural entities we take to be alive are mere matter in motion. Frogs, trees, dogs, and beetles only superficially differ from clocks, trains, and other inanimate objects, for the deepest causal mechanisms driving both kinds of being are really the same. Mechanistic readings seem natural to adopt when we consider some of Kant's remarks on organisms and teleology. Kant states that the concept of a natural end has no objective reality because we cannot cognize the world-cause that would make the existence of such ends possible (i.e., an intelligent God).[57] Generally, these readers emphasize, Kant makes any judgment of teleology in nature a *reflecting* judgment, and while reflecting judgments tell us something about the subject, they tell us nothing about objects. Mechanistic readers also insist that Kant says Newton's Laws of Mechanics explain the alterations of *all* material things, and the things we call organisms certainly appear to be material things.[58] Thus, mechanistic readers also encourage the reduction of the life sciences to a mathematizable physics.

Though the *First Critique* and the *Metaphysical Foundations* have tempted many toward a mechanistic reading of nature, Kant's remarks in the *Critique of the Power of Judgment* may

[56] As I outline in Section 2, McLaughlin 1990 seems to push towards a strong mechanistic reading of the text. Robert Richards also appears to attribute a strong mechanistic understanding of nature to Kant throughout *The Romantic Conception of Life* (2010,. 158).

[57] See *CPJ* §75.

[58] In the *Metaphysical Foundations of Natural Science*, the scope of the Laws of Mechanics extends to all material things. The First Law of Mechanics scopes over "all changes of corporeal nature" (*MFNS* 4:541), the Second Law applies to "every change in matter" (*MFNS* 4:543), and the Third Law to "all communication of motion" in matter (*MFNS* 4:544). If we think of the "mechanism of nature" as all of nature insofar as it is governed by the Laws of Mechanics and find that, everywhere we turn, we can explain the changes material objects undergo in terms of mechanism, that seems like compelling evidence for the claim that we can determine nature is thoroughly mechanistic.

steer us in another direction altogether. In this text, Kant frequently mentions that that there are proper occasions to apply the concept of a natural end in our investigations of nature and that observation presents us with examples of organisms.[59] Kant also affirms that "the mere mechanism of nature is incapable of providing an explanatory ground of the generation of organized beings" (*CPJ* 5:389), that "we can never adequately come to know the organized beings and their internal possibility in accordance with merely mechanical principles of nature" (*CPJ* 5:400, my emphasis), and that "the mechanism of nature…is not by itself sufficient for conceiving of the possibility of an organized being" (*CPJ* 5:421-2). Statements like these contradict the strong mechanistic reader's push to reject the very possibility of organisms and appear to presuppose a picture of nature and the organism that may undermine even a moderate mechanistic reading.

In this final chapter, I detail my *non-mechanistic* interpretation of Kant's doctrine of nature and the organism. I show that we can strongly commit to the potential truth of the claim that there are organisms even though we can never know whether organisms exist. Against strong mechanists, Kant nowhere endorses the claim that we can know there are no organisms. Against moderate mechanists, I argue that Kant gives us the resources to believe in the existence of organisms. Belief, rather than knowledge, is the positive epistemic attitude we should adopt towards the existence of the organism.[60]

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[59] I survey these passages directly below, in Section 3.

[60] Note that this approach to getting at an object of an improper science (i.e., any science besides Newtonian physics) is similar to, but importantly different from, one that has been undertaken with respect to chemistry. Michael Bennett McNulty performs a similar maneuver with respect to chemistry in his "Chemical Dissolution and Kant's Theory of Nature." There, he concludes, "Although completed infinite division, upon which chemical dissolution depends, cannot be cognized, it can be thought as an idea of reason in order to make conceivable genuine, continuous dissolution in chemistry" (2018, 555). Of course, McNulty emphasizes our ability to *think* the infinite division present in chemical dissolution, but does not quite commit to the claim that we can posit the existence of chemical dissolution on the basis of our ability to think it. In this last regard, my strategy differs from McNulty's, as I argue that belief is stronger than merely *conceiving of* some thing.

Section 1 provides a sketch of some Kantian terminology that plays an indispensable role in articulating the commitments of mechanistic and non-mechanistic readers. Section 2 summarizes the arguments that moderate and strong mechanists make in favor of their views. In section 3, I raise several complications for the mechanistic reading. For one, Kant plainly states that experience leads us to the concept of an organism and that nature furnishes us with examples of organisms (3.1). Additionally, in the Antinomy of Teleological Judgment, Kant plainly states that we can never prove the principle that all material things are generated in accordance with mechanistic laws only (3.2). Finally, he distances himself from those philosophers who have affirmed that there are no organisms in nature (3.3). In section 4, I outline my non-mechanistic reading of Kant's doctrine of nature. While mechanists are right to maintain that we can neither empirically cognize organisms directly nor know that organisms exist, the text leaves open the possibility that we may *believe* in the existence of the organism in nature (4.1). Furthermore, it is fully consistent with the text to hold that the target of our belief is a natural object, not merely a mental act such as a judgment (4.2). We do not merely believe in the usefulness of some reflecting judgment for the sake of our cognitive economy. When we believe in the organism, we make a positive commitment to the existence of a certain kind of natural entity. Section 5 closes with reflections on how this reading interacts with Kant's transcendental idealism and with his moral philosophy. Notably, one consequence of the reading I develop here is that Kant may be a anti-reductionist about life science.

1. A note on cognition, knowledge, and belief

Before delving into the nuances of each available position and offering my alternative, let us briefly discuss how Kant characterizes cognition [*Erkenntnis*], knowledge [*Wissen*], and belief

[*Glaube*]. Understanding each term shall leave us with a better grip on how mechanistic readers differ from one another and where non-mechanists depart from mechanists.

When I discuss cognition, I refer specifically to the representational state introduced at the outset of the *Critique of Pure Reason*'s Transcendental Logic.[61] In this sense of the term a cognition is a representational state that a subject forms when they combine a given intuition with a concept of the understanding. An intuition is any representation that we receive in space and time through our faculty of sensibility, and to Kant such a representation "contains only the way in which we are affected by objects" (A51/B75). For instance, the redness of a rose is something we are given as a sensible intuition. In contrast, a concept is a representation that we spontaneously think. Kant glosses the understanding, which is our faculty of concepts, as a "faculty for **thinking** of objects of sensible intuition" (A51/B75). For instance, upon sensing the redness of a rose, my faculty of understanding leads me to abstractly compare this rose to other roses, to consider the causal process that culminated in the existence of this rose, and so on. These two heterogenous faculties and the species of representation proper to each are *necessary* for forming a cognition; without one or the other, cognition is impossible. As Kant puts it, "Thoughts without content are empty, intuitions without concepts are blind" (A51/B75). Cognition is a state a subject achieves when they combine a given intuition and a concept of the understanding in a particular way.

Whereas cognition is a representational state that involves thinking about objects given to us in space and time, knowledge [*Wissen*] and belief [*Glaube*] are modes of assent [*Fürwahrhalten*], or epistemic attitudes that we adopt towards propositions. There are a wide variety of ways in which one can assent to a proposition,[62] and each is distinguished by considering

[61] For a much more thorough and comprehensive discussion of cognition than I can offer here, see Watkins and Willaschek's "Kant's Account of Cognition" (2017).
[62] I do not discuss all modes of assent here. See Andrew Chignell's (2007) "Belief in Kant" for an all-inclusive synopsis of the various forms of assent and the differences between each.

whether we have sufficient objective grounds or subjective sufficient grounds for assent. Ideally, an individual has *sufficient* objective and subjective grounds for assent, the result of which is knowledge. The right kinds of objective grounds are "perceptual, memorial, or introspective states", and those states serve as sufficient objective grounds only if they render the proposition in question "probable to a degree that licenses assent with a moderate-to-high degree of probability" (Chignell 2007, 327). We could think of principled observation, data compiled on the basis of those observations, reflection on the legitimacy of the data, and so forth as ingredients that contribute to the formation of sufficient objective grounds. Subjective grounds consist in the "subject's own determination that the assent is based on sufficient objective grounds," and those grounds are sufficient only if "the everyday process of using memory, a priori reasoning, introspection, and so forth" allows the subject to establish a high degree of confidence in the sufficient objective grounds motivating the proposition in question (Chignell 2007, 328). Subjective grounds generally correspond to one's level certainty with respect to their objective grounds.

Combining the elements of our discussion so far, we might think of a cognition as prime candidate for a sufficient objective ground of assent. Direct perceptual acquaintance with an object accompanied by a concept that I have legitimately applied to it in a judgment seems like just the kind of evidence that would license an assent with a moderate-to-high degree of probability. My cognizing that the petals of a flower are of a certain color and shape, that the flower has a certain scent, that the stem of the flower is thorny, and so forth may license my claim to *knowing* that this flower is a rose and not a lily.

In contrast to knowledge, Kant writes that "if assent is only subjectively sufficient and is at the same time held to be objectively insufficient, then it is called **Belief**" (A823/B851). Andrew

Chignell glosses belief as a "firm, positive, and voluntary attitude that is subjectively sufficient$_2$ for a particular subject in a particular circumstance, given his or her interests and ends, and that has implications for the subject's rational action, assertion, and deliberation" (Chignell 2007, 357). Subjective grounds that are sufficient$_2$ are grounds with some nonepistemic merits. For instance, assent to the proposition that there is a future life has the nonepistemic merit of allowing us to avoid rendering the moral law practically absurd (2007, 334). Belief is a state characterized by a lack of sufficient objective grounds – we cannot appeal perceptual, memorial, etc. states to show that the propositions we believe in are probable with a moderate to high degree of certainty. Since the subjective grounds of belief are merely *nonepistemic* reasons for desiring or valuing the truth of these assents, we have no direct route to proving their truth.

Based on Kant's characterization of each term, it appears that there will *never* be an instance in which cognition serves as evidence for a belief. The moment we have cognition of something we have evidence that can ground a much stronger variety of assent than belief. Instead, belief is the right kind of assent to form towards a proposition like "God exists." We can never cognize God since God cannot be presented to us in space and time. Still, Kant explains that we have a special interest in presupposing that God exists as a precondition for investigating nature as a purposive unity (A826/B854). Thus, while we lack sufficient objective grounds for knowing that God exists, we have a special subjective interest in holding the existence of God to be true. This special subjective interest licenses our belief in a wise creator of nature.

2. Surveying mechanistic readings of Kant

Now that I have laid out my understanding of these key terms, I summarize the three interpretations I will weigh in this paper.

- *Strong mechanistic reading*: To Kant, the things we call organisms may seem to exhibit internally purposive activity, but we know that no such activity is possible in nature. Thus, we can be certain that we will eventually explain this apparent internal purposive activity in mechanistic terms.

To the strong mechanistic reader, we cannot empirically cognize the internally purposive causality characteristic of an organism, but we are still presented with organisms in outer sense, as objects of empirical cognition. However, the existence of objects of empirical cognition can only be explained by the Laws of Mechanics – more precisely, the Law of Inertia.[63] Whatever is subject to the Law of Inertia is mere matter in motion, which implies that if x is an object of empirical cognition, then x is determined merely by external causes. Thus, insofar as they are objects of empirical cognition, the things we call organisms are completely determined by external causes, not internal causes such as ends. As long as we assume that Newtonian mechanics applies to all of nature, we know that there is no internally purposive activity in nature. Since organisms are by definition things that exhibit internally purposive activity and no such activity exists in nature, we can know that organisms, strictly speaking, do not exist in nature.

- *Moderate mechanistic reading*: To Kant, the things we call organisms may seem to exhibit internally purposive activity, but we cannot grasp the principle of such activity. In contrast, we can cognize the material external principles that contribute to a mechanistic explanation of a thing's activity. Thus, we have reason to believe that this apparent internally purposive activity will one day be explained in mechanistic terms.

Moderate mechanistic readers set out with the observation that we cannot cognize the causality by virtue of which we judge a thing to be an organism. McLaughlin also neatly summarizes how a moderate mechanist begins with this insight and arrives at the conclusions definitive of their

[63] I take McLaughlin to be upholding this premise when he writes, "We are said to be so constituted that we cannot conceive a real causation other than in a mechanistic-reductionist fashion" (1990, 172). This is likely why it follows for him that "The method of classical modern physics is equated with scientific explanation in general and the latter is equated with knowledge as such" (1990, 176).

position. The kind of causality exhibited by an organism cannot be thought through the understanding, for the understanding represents mechanistically and the purposiveness of an organism is inherently non-mechanistic.[64] Moreover, we may judge that a rose drinks water through its roots because it strives to survive, but the relevant causal ground in this explanation – the rose's desire to survive – is not something that we can behold in space and time. Unable to think or intuit the purposiveness of the organism through the understanding, we cannot attain empirical cognition of the purposiveness in question; and lacking empirical cognition of an organism's purposiveness, "Organisms. . . seem to involve a causality sui generis that we cannot recognize as real."[65] We lack cognitive access to the full picture of organic causality, and this bars us from knowing whether there are organisms "out there" in nature one way or the other.

In contrast, we can cognize mechanistic causal relations. We perceive that a rose wilts because its soil has been oversaturated. The current material condition of the rose – its drooping colorlessness – is explained and precipitated by some antecedent material state – the wetness of the soil. Thus, to the moderate mechanist, there are plentiful, cognitively accessible examples of nature's mechanism all around us. This situation motivates the belief that we will one day exhaustively explain apparent instances of internal purposiveness in nature in mechanistic terms.

Mechanistic readers of all varieties believe that Kant's views on reflecting judgment lend further support to their interpretation. Kant states that, when we attribute purposiveness to nature, we do so on the basis of a reflecting judgment. In contrast, on the occasions that we provide a mechanistic explanation of some natural object, we do so in the form of a determining judgment. While determining judgments can reliably capture the structure of nature, reflecting judgments are

[64] See McLaughlin 1990, 176.
[65] McLaughlin 2014, 156 and 1990, 47.

based on regulative principles, and only tell us about the cognitive economy of the subject. As long as the purposiveness of nature is a predicate of a merely reflecting judgment, it says nothing about objects in nature.[66]

- *Non-mechanistic reading*: To Kant, the things we call organisms seem to exhibit an internally purposive activity. In addition, Kant expresses certainty that mechanical laws will "never adequately" (CPJ 5:400) explain the internally purposive activity of the things we call organisms. Thus, we can (and in certain cases should) believe that some things in nature are in fact produced as a result of internally purposive activity.[67]

While there could be more radical versions of non-mechanistic interpretations of Kant, which might claim that we do in fact empirically cognize organisms, the version of non-mechanist interpretation I develop here begins by agreeing with mechanistic readers of all stripes – we neither cognize the causal structure definitive of organic activity nor determinately judge that there are organisms in nature. However, a non-mechanist disagrees that we have the grounds to know that there are no organisms in nature. For reasons that will become clear below, a non-mechanist also denies that we can know mechanism will one day give us an exhaustive picture of nature. For all we can know, there will always be phenomena in nature that occasion a non-mechanistic explanation of whatever is before us that appeals to internal purposiveness. Thus, the non-mechanist maintains that we can (and in some cases must) form the belief that there are organisms in nature. This is considerably stronger than the moderate mechanist's belief that there may or may not be organisms in nature and diametrically opposed to the strong mechanist's knowledge that organisms do not exist. Finally, the non-mechanistic reader rejects the notion that reflecting

[66] I return and respond to this idea directly below in Section 4.

[67] To be sure, someone may formulate a stronger non-mechanistic thesis. This stronger non-mechanistic thesis would hold that Kant gives us the resources to empirically cognize the principles of internally purposive activities, and such cognitive access licenses knowledge that mechanism will not be vindicated and that there are indeed organisms in nature. Though the resources for assembling such a reading, which would push Kant closer to the likes of Schelling and Hegel, may be present here, I do not pursue this interpretive option.

judgment is incapable of telling us anything about nature and the objects in it. Below, we shall see that reflecting judgments require a firm presupposition about the existence of certain objects in nature. In what remains, I offer a defense of this non-mechanistic interpretation of Kant's doctrine of nature.

3. Complications with the strong mechanistic reading

The strong mechanist claims, on Kant's behalf, that we can know there are no organisms. There are several reasons why this interpretation should strike us as unattractive. For one, this interpretation overlooks all those passages in which Kant plainly states that experience and nature furnish us with examples of organisms. Two, the strong mechanist assumes that we can know that all material things are in fact produced in accordance with the laws of mechanism. However, Kant firmly pronounces that such a thesis can never be proven true. Finally, the strong mechanist commits Kant to a dogmatic form of "idealism" he himself would find unacceptable.

3.1. Experience's and nature's organic suggestions

The strong mechanist wants us to arrive at the conclusion that Kant gives us the tools to definitively prove there are no organisms in nature. Nevertheless, one rather pronounced reason not to endorse this conclusion surfaces when we attend closely to Kant's verbiage when he discusses the organism. Reaching back into the Canon of the *First Critique*, we see Kant claim that, "purposive unity is still so important a condition of the application of reason to nature that I cannot pass it by, especially since experience liberally supplies examples of it" (A826/B854). Kant states that "Experience leads our power of judgment to the concept" of a natural end (*CPJ* 5:366) and that the principle stating that an organized product of nature is a natural end is "derived from experience, that is, experience of the kind that is methodically undertaken and is called

observation" (*CPJ* 5:376). Whereas the "cause of the possibility of a natural end", i.e., an intelligent author of nature, is merely an idea of reason, "the consequence that answers to it (the product) *is still given in nature*" (*CPJ* 5:405). As the question of how organisms arise in the first place is one that reason compels us to pose, it is *necessary* for us to "conceive of a particular kind of causality for it that is not, unlike the mechanism of natural causes, found in nature" (*CPJ* 5:411). What these passages and passages like them suggest is that something about the way in which nature presents itself to us leads us to reflect upon objects such that they are generated and act in accordance with ends. Furthermore, as we have seen above, Kant maintains that, "for things we once acknowledge [*anerkennen*] as natural ends" (*CPJ* 5:415), mechanically causal explanations will *never* suffice as a full account of their generation and activity. As Kant indicates in the "General Remark on the Teleology" following the conclusion of the main text of the Methodology, the very concept of ends of nature is given to us "only through experience" (*CPJ* 5:476).

Similar remarks about the purposiveness of nature spill over into Kant's lectures, as well. For instance, when laying out what he considers the best proof for the immortality of the soul in *Metaphysik* L_2, he states the following the premise: "We find in nature a connection of efficient causes, also connection of ends, this connection is indicated in organized beings, and the connection of finality <*nexus finalis*> with living beings is the highest principle, from which we cannot depart at all" (*LM* 28:592). The principle that we derive from the connection of ends we "find" in nature is that every organ of a living thing serves a purpose. From this, Kant says, we can infer that no organ or faculty of the human being is purposeless. Since some faculties set tasks for the human being that cannot be completed in one lifetime, there must be a future life. The fact that we *find* this connection ends in nature and that it is "indicated in organized beings" is an indispensable first step of this proof.

In light of these passages, one ought to ask mechanistic readers, What exactly are we acknowledging when we acknowledge a thing as a natural end? What is the nature of that acknowledgement such that it licenses *certainty* about the fact that mechanical explanations "will still always be inadequate" for those things? The strong mechanist is, to reiterate, correct in their assertion that we cannot empirically cognize organisms. But Kant seems to be suggesting that nature and experience still *lead us to, suggest,* and even *give us examples of* the concept of the organism. Assuming that nature is not lying to us and that we are not merely deluded, organisms must be something other than mere machines. We cannot reduce the causality characteristic of the organism to the merely external causality of mechanism.

3.2. The unprovability of the constitutive thesis of the Antinomy of Teleological Judgment

Besides Kant's overt remarks about nature's and experience's suggestions that there are organisms, we may also point directly to a key step of the Antinomy of Teleological Judgment to disprove the strong mechanistic reading. Concerning the Antinomy's antithesis, Kant does definitively and forcefully reject that the concept of an organism "can be treated dogmatically for the determining power of judgment" (*CPJ* 5:396). We cannot deploy the concept of a natural end as a universal predicate under which we may subsume particulars, or the manner in which we would use schematized concepts of the understanding to produce determining judgments with the material supplied by intuition. But saying that (i) *we cannot determinately judge that there are organisms* is not the same as saying that (ii) *we can prove that there are no organisms in nature*. The strong mechanist seems to arrive at (ii) by means of Kant's remarks about objects of nature and the scope of the Second Law of Mechanics. However, a proof that there cannot be any organisms in nature presuppose the truth of the constitutive thesis of the Antinomy - namely, that "All generation of material things is possible in accordance with merely mechanical laws" (*CPJ*

5:387). Yet, Kant insists that no constitutive principle can be proven true (ibid). So the strong mechanist must take themselves to be arriving at a claim other than (ii). (And they surely cannot be relying (i), for that claim alone does not license an inference to the conclusion that we can know there are no organisms in nature.)

Kant's position appears not to be a strong mechanistic one according to a certain interpretation of strong mechanism. The strong mechanist would fall into a dialectical error themselves if they were committed to the thesis that we can determinately say all things are generated merely in accordance with mechanical laws of nature. Instead, the strong mechanist must be committed to something more like the regulative maxim of mechanism – namely, that we must judge all objects in nature to arise in accordance with laws of mechanism. This seems more like the appropriate line to attribute to McLaughlin, as he himself states, "We must judge all natural things mechanistically because for us only mechanical objects can be explained" (1990, 168). Here, McLaughlin appears to be restating the maxim that, per Kant, "I **should** always" employ when reflecting upon natural products (*CPJ* 5:387). Nevertheless, while Kant maintains that we *should* extend this maxim as far as we possibly can, "this is not an obstacle to the second maxim" – i.e., that it is possible to judge natural products in accordance with a teleological causality. There are proper occasions to suspend this maxim and to judge that some objects are not merely mechanically determined. If the strong mechanist's line requires us to adopt the view that Kant really only means to endorse the regulative maxim and that we should reject the teleological maxim entirely, this seems to fly in the face of Kant's constant reminders that these two maxims can coexist in our reflections upon nature.

The strong mechanist's thesis must be that, *as far as we can judge*, we *ought to assume* that organisms are mere machines. This is the most expedient way to make advances in our natural

scientific investigations of nature. However, as we have seen, these investigations run up against a limit – "we can never adequately come to know the organized beings and their internal possibility in accordance with merely mechanical principles of nature, let alone explain them" (*CPJ* 5:400). Merely mechanical explanations will never slake reason's (subjective) demand that we give an account of the generation and activity of an organism, where that account elicits an appeal to an intelligent author of nature. Interpreted this way, the strong mechanist's line does not justify the conclusion that we can know there are no organisms in nature, but innocuously affirms Kant's regulative maxim of mechanism.

3.3.Strong mechanism as a bad "idealism"

A final reason to reject strong mechanism is that it commits Kant to a form of "idealism" that he explicitly rejects in §§72-73 of the Critique of the Teleological Power of Judgment. According to the "idealists" discussed in these sections, "all purposiveness in nature is unintentional" (*CPJ* 5:391). In other words, all purposiveness of nature is reducible to or actually explained by the mechanism of nature. There are two species of "idealism" in this sense. One species, which is "ascribed to Epicurus or Democritus", asserts that "blind chance is assumed to be the explanation not only of the correspondence of generated products without our concepts of ends, hence of technique, but even of the determination of the causes of this generation in accordance with the laws of motion" (*CPJ* 5:393). The fact that we happen to represent certain forms of nature as end-directed is a mere accident, a product of "blind chance." Kant rejects this idealism because, by means of it, "nothing is explained" (ibid).

The second species of idealism explains that the teleology of nature is grounded in a "blind necessity": "the connection of ends in the world must be assumed to be unintentional" or explained by the necessity of nature (*CPJ* 5:391-2). This position strips the purposive organization of nature

of any contingency, and this spells a problem for this view, since without contingency "no unity of purpose can be thought" (*CPJ* 5:393). Ultimately, this form of idealism does not give an explanation of the purposiveness of nature at all, for stating that all ends are unified by virtue of the fact that they are accidents inhering in a necessary substance does not make the purposive unity of nature any more comprehensible. Simply stating that the purposiveness of nature is necessitated by an unintentional original ground does not tell us why nature is organized in this particular way and not some other.

If strong mechanists are right, Kant adopts an "idealist" position that he plainly rejects. The strong mechanist argues that, while we label certain things organisms, we know (as a matter of fact) that there are no organisms in nature. This presupposes that the apparent purposiveness of a natural product is actually explained by and grounded in universal and necessary laws of motion. But Kant insists that reducing teleology, or rather what appears to have purposiveness, to some unintentional ground – whether it is a law of nature, an unintelligent God, or blind chance – makes no progress toward explaining why nature has the contingent structure that it does. Any position that states teleology is a mere illusion and brutely asserts that nature is thoroughly and exhaustively necessitated by the laws of motion simply punts on the question of why nature and natural products exhibit an end-directed unity; a strong mechanistic reading attributes this type of uninformative reading to Kant. These particular "why" questions are inevitable because, as Kant repeatedly states, nature liberally furnishes us with examples of its purposiveness at every turn. Explaining why nature and natural products are apparently organized in accordance with ends requires something more than stubbornly affirming that absolutely everything is determined by the laws of motion. Additionally, the *Third Critique* urges a more nuanced reading of Kant's doctrine of the organism.

Let us now turn to the task of assembling an alternative non-mechanistic understanding of the organism.

4. Beyond moderate mechanism and towards a *non-mechanistic* interpretation of Kant

What the above considerations show us is that Kant never quite states that we can know there are no organisms. Rather, the text appears to pull us away from this conclusion. Naturally, one might retreat to a moderate mechanistic reading – we may not be able to prove that there are no organisms, but we can know that mechanism applies to at least *some* of nature. While we cannot know that mechanism explains *all* of nature, we can still believe (and do science as if) all of nature is mechanism.

In this section, I argue that Kant gives us the resources to make a more positive commitment towards the existence of the organism. Given the character of Kant's remarks about organisms, we should not brutely deny the existence of organisms. But I show that Kant means for us to positively affirm, in the sense of have belief in, the existence of organisms in nature. Section 4.1 opens by defending the claim that *belief* is the proper epistemic attitude to adopt vis-à-vis the existence of the organism, and Section 4.2 defends the claim that this belief really does target the object corresponding to an organism, not merely our judgments about organisms.

4.1. What's the right epistemic attitude to adopt towards the organism?

All mechanistic readers are justified when they state we lack the adequate grounds to know that there are organisms. We have witnessed how the strong mechanist errs in claiming that we can maneuver from this claim to the conclusion that we know there are no organisms in nature. The moderate mechanist also errs when they believe that mechanism can one day give us a complete picture of nature. As I have shown above, Kant states that mechanism will *never* be proven

constitutive of nature and that certain natural products can *never* be explained in mechanistic terms. Yet, lacking knowledge that there are organisms, how can we explain these decidedly anti-mechanistic remarks in a way that does not violate our cognitive limitations?

While we cannot know that there are organisms, another form of assent may allow us to make a firm commitment to the existence of organisms – that is, *belief*. Chignell correctly observes that there are various species of belief in Kant. While multiple forms of belief may accurately apply to the existence of the organism,[68] one type of belief seems especially appropriate in this context – namely, theoretical belief. Chignell defines this species of belief as follows:

> ***Theoretical Belief***: S is permitted to form a Theoretical Belief that p if and only if
> (a) S has set a contextually appropriate contingent end e,
> (b) a hypothetically necessary condition of S's attaining e is S's having a firm assent that p or some relevant alternative to p,
> (c) p is a logically possible, "merely theoretical" proposition for or against which S does not have sufficient objective grounds,
> (d) S's available objective grounds, if any, render p at least as likely as any relevant alternative to p (though not likely enough to count as Conviction). (Chignell 2007, 350)

We might think that the anatomist, the medical physiologist, the archaeologist of nature, and so forth have a contingently appropriate end of explaining the structure of animal or human bodies, chronicling the species of animals present in nature, and so forth. To explain such phenomena, these researchers attaining their ends is firmly assenting to the statement that there are organisms, or beings organized in accordance with ends. Indeed, as early as the Appendix to the Dialectic of the *First Critique*, Kant maintains that in certain fields scientists must make a bold assumption [*man darin ganz dreist…annimt*] that there are natural products organized in accordance with ends (A688/B716). Furthermore, Kant insists here, in symphony with many of the passages mentioned previously, that our accumulated observations can authorize [*uns bisherige Beobachtung*

[68] Below, I sketch a provisional case for the role of moral belief in grounding existence claims about the organism (see Section 5).

berechtigen kann] this bold assumption (ibid). Ultimately, it is certainly logically possible that there are organisms, since we cannot prove the truth of the constitutive Thesis of the Antinomy. The available objective grounds – recall experience's suggestions and nature's offerings discussed above – render the existence of organisms at least as likely as any alternative to this proposition.

Certain mechanistic readings commit the biologist and the biologically inclined philosopher to a contradiction. We can judge that certain things are mechanically inexplicable organisms, but (on a strong mechanistic reading) we know for a fact that those things are not organisms. If the target of our biological investigations is an organism, we can be certain, beyond a shadow of a doubt, that that target is null. By denying the objective reality of the organism to this degree, Kant makes the biologist out to be a modern-day Don Quixote, concerning themselves with an explanandum that is a figment of their imagination. Similarly, according to the moderate mechanist, the biological philosopher ought to believe that their explanations will some day be made obsolete by mechanism. Knowing that biological explanations are doomed to succumb to mechanistic ones, the biologist might justifiably resort to defeatism, concluding that there is no reason to continue their research.

However, we must recall that Kant says we can never prove that all material things are generated in accordance with merely mechanical laws. On top of that, it is *necessary* that we judge objects in accordance with non- mechanical laws in some cases, according to Kant.[69] Differently stated, there are circumstances in which we need to apply teleological judgments to nature, and those circumstances demarcate the object and domain of theoretical biology. Since there is a

[69] See *CPJ* 5:404.

contextually appropriate need for biology to have (and investigate) a proper object and domain, it is possible to form a theoretical belief in the existence of the organism.[70]

By theoretically believing that organisms exist in nature, we "give direction to our inquiry and motivate the search for unified, systematic, simple theories, without themselves amount to Knowledge", or a mental state for which we do have sufficient objective and subjective grounds of assent (Chignell 2007, 343). Theoretically believing that there are organisms in nature can honor the limitations that Kant sets on our critical faculty of reflecting judgment while allowing us to avoid the performative absurdity of judging nature in a manner we know not to befit nature. Equipped with this belief, we gain more than adequate motivation for continuing research (both scientific and philosophical) into the structure and activity of those things we are compelled to recognize as purposive.

4.2. What is the target of our belief in the organism?

At this point, a mechanistic reader might agree that, though we can neither empirically cognize the organism nor know that there are organisms, belief seems warranted in this context. However, the mechanist might press that the target of belief is our own judgment. That is, we believe that our teleological reflecting judgments are useful for our cognitive economy, but belief in this context does not correspond to any object or its existence. Why should we consider the target of our beliefs the objects in nature we take to be organisms, not merely the reflecting

[70] At this point, someone might worry that biology does not differ at all from a pseudoscience like astrology. Astrology requires a belief that cosmological phenomena have an intimate impact on our quotidian affairs. As long as I believe that Venus's transits affect my mood, I can legitimately explain my current state by appealing to this planet's position. Because it is based on a belief, biology is no different from astrology.

Perhaps one way of responding to the worry is to invoke this contextually appropriate need. Kant never mentions that there is such a need to employ astrological concepts when explaining natural phenomena. Nothing about my or my friend's mood *necessitates* the invocation of Venus's transits. In contrast, certain appearances beckon the invocation of teleological concepts. It is this contextually appropriate demand that could separate biology from pseudosciences.

judgments we form about those objects? In order to formulate an answer to this question, we must first consider what reflecting judgment is and what reflecting judgments are about.

4.2.1. Reflecting judgment and its principles

In general, "To reflect (to consider), however, is to compare and to hold together given representations either with others or with one's faculty of cognition, in relation to a concept thereby made possible" (*CPJ* 20:211). Reflecting judgment, which we might consider a species of reflection in general, involves the comparison and holding together of *given* representations. A few lines down Kant clarifies that the concept one finds as a result of reflecting corresponds to "given empirical intuitions" (*CPJ* 20:213). The process of reflection begins with given intuitions and finds a concept that can explain the contingent structure of nature or some object in it.

All powers of judgment presuppose and are guided by a principle. While the constitutive principles of the understanding serve to ground determining judgments and make experience, or empirical cognition, possible, the structure of reflecting judgment requires us to find a different sort of principle, one that does not automatically lead to empirical cognition. The principle of reflecting judgment takes the following form in the First Introduction to the *Third Critique*: "The principle of reflection on given objects of nature is that for all things in nature empirically determinate concepts can be found, which is to say the same as that in all of its products one can always presuppose a form that is possible for general laws cognizable by us" (*CPJ* 20:211-12). Without such a presupposition, "reflection would become arbitrary and blind" and we would have no guarantee that our reflections agree with nature in any way (*CPJ* 20:212). To be sure, such a principle does not ground or culminate in empirical cognition. Only the constitutive principles of determining judgment can produce such a state. Still, the principle of reflection serves to guide or regulate our investigations of nature.

These passages teach us a few things. For one, reflecting judgment is not merely subjective if we characterize their mere subjectivity as having only to do with mental acts and their organization. Rather, reflecting judgment occurs in response to given empirical intuitions. Moreover, reflecting judgment is not radically subjective in the sense that there is some expectation that reflection should agree with nature, as it's necessary to "presuppose" the principle that, for all "given objects of nature", we can find an empirical concept that explains their form. As Kant later adds, "Thus the power of judgment itself makes the technique of nature into the principle of its reflection a priori, without however being able to explain this or determine it more precisely or having for this end an objective determining ground for the general concepts of nature (from a cognition of things in themselves), but only in order to be able to reflect in accordance with its own subjective law, in accordance with its need, but at the same time in accord with laws of nature in general." (*CPJ* 20:214). In order for our reflections on certain natural products to make sense and to agree with nature, the power of judgment requires us to presuppose the "technique of nature." Though we can never empirically prove that nature has such a technique, the power of judgment requires us to presuppose that nature is purposive. Lacking such a presupposition, reflecting judgment is blind, arbitrary, and rudderless.

The question therefore becomes, what exactly is the status of such a presupposition? It does not seem as though we can empirically cognize, know, or definitively prove the existence of the objects of such an assumption. Kant clarifies that the principle of purposiveness is "regulative" (*CPJ* 5:168; 5:197). We presuppose that nature has a "technique", or is organized in accordance with purposes, and thereby make possible teleological reflecting judgments, which attribute an objective, inner, and material purposiveness to certain natural products, possible. In the Critique of the Teleological Power of Judgment, Kant further specifies that

> [t]he concept of a thing as in itself a natural end is therefore not a constitutive concept of the understanding or of reason, but it can still be a regulative concept for the reflecting power of judgment, for guiding research into objects of this kind and thinking over their highest ground in accordance with a remote analogy with our own causality in accordance with ends; not, of course, for the sake of knowledge of nature or of its original ground, but rather for the sake of the very same practical faculty of reason in us in analogy with which we consider the cause of that purposiveness. (*CPJ* 5:375)

Here, it is significant that Kant refers to the very concept of "a thing as in itself a natural end" as a "regulative concept for the reflecting power of judgment." If the regulative principles of any power of judgment are just those principles which we presuppose for the sake of formulating a reflecting judgment upon a given representation that is not blind or arbitrary but potentially agrees with nature, the concept of a thing in itself as a natural end is just that kind of a presupposition with respect to teleological judgments. Such a concept guides our research though it never culminates in "knowledge of nature or of its original ground".

4.2.2. Is the target of our belief a judgment or an object?

In light of this quick analysis of reflecting judgments and their principles, I propose that the target of our belief in the organism is not merely a mental act or representation, but an object. In short, our belief in the organism is expressed as a presupposition about the organization of nature and natural objects, one that we must make in order to even form a reflecting teleological judgment.

This line represents a departure from the consensus. Commentators frequently argue that all regulative concepts and principles – including those that regulate teleological reflection – do not refer to anything that exists, serving a merely heuristic purpose. These concepts are mere convenient fictions.[71] In more optimistic moods, these commentators are totally non-comital about

[71] In addition to strong mechanistic readers mentioned throughout subscribing to such a reading, many interpreters of the *Critique of Pure Reason* think similarly when explaining how ideas of pure reason in their regulative use work. Confer Henry Allison's (2004) *Kant's Transcendental Idealism*, Jonathan Bennett's (1978) *Kant's Dialectic*, and Fredereick Rauscher's (2010) "The Appendix to the Dialectic and the Canon of Pure Reason."

the existence of these objects' referents.[72] In both cases, the moves commentators rely upon are similar – such regulative concepts or principles can never be involved in empirical cognition, and since empirical cognition is the only means of establishing a well-grounded existence claim, the objects picked out by such principles or concepts either cannot or may not exist. Because of their deflationary views about regulative principles, these interpreters often reason that these principles cannot even refer to objects in nature, but always refer to mental states or acts.

One interpreter who notably departs from this trend is Paul Guyer. In his 2003 "Kant's Principles of Reflecting Judgment", Guyer characterizes regulative concepts and principles according to the following three criteria:

> From Kant's account of the regulative principles in the *Critique of Pure Reason*, we can therefore infer that such principles (a) set a goal of the systematization; (b) accompany this goal with a transcendental presupposition that the objects of our inquiry or action make the attainment of this goal possible and that there is a ground for this assumption, but one that permits at best a limited transcendental deduction; and (c) provide a heuristic method for the pursuit of this goal, but one that is irremediably liable to the contingencies of our empirical situation. (Guyer 2003, 18)

The second criterion is of particular note for our purposes. Guyer asserts that the presuppositions we make about objects and the world when discharging a regulative principle rise to the level of belief concerning the existence of the objects in question: "it would be irrational for us to pursue any goal, cognitive or practical, in the absence of a belief in the *possibility* of tis attainment. For that reason, a regulative principle posits, or is accompanied by the posit, that the *domain* of our inquiry or action—nature itself—is so constituted as to make the attainment of our goal *possible*" (2003, 4). The transcendental presupposition that "accompanies" a regulative principle or

[72] While moderate mechanists subscribe to this reading in the *Third Critique*, there are also many commentators who subscribe to this view in their interpretation of the regulative use of the ideas of pure reason in the *First Critique*. See, e.g., Corey Dyck's (2014) *Kant & Rational Psychology,* Katharina Kraus's (2018) "The soul as the 'guiding idea' of psychology", and Rachel Zuckert's (2017)"Kantian Ideas of Reason and Empirical Scientific Investigation."

conceptis something we posit as an article of belief. Furthermore, there is an actual ground backing this assumption, such that it is possible for us to realize this presupposed goal.

While all of this might lead us to suspect that we can attach a similar presupposition and belief to the regulative concept of an organism, Guyer inexplicably singles this concept out as an exception to the rule:

> although in a general sense we are given the concept of the organism, that concept is only an abstract concept of a kind of system that serves as a regulative ideal for our investigations, and in these investigations, we ultimately seek mechanical concepts of causation that can explain generation, growth, and self-preservation, even though we may be barred from completing these explanations. (2003, 45)

Here, Guyer suggests that we are not entitled to the same kind of presupposition when deploying the regulative concept of the organism. When we deploy this regulative concept, we ultimately know that we are seeking a non-teleological explanation of the natural object. In this sense, the regulative concept of the organism represents an exception to his general interpretation of regulative concepts and their objects: We do not believe in the existence of the object corresponding to the organism, for this concept merely facilitates the advancement of our mechanistic understanding of nature. This regulative concept is unique in that it *does not* elicit belief in the existence of any object pertaining to it.

Against the interpretive consensus, I maintain that we can presuppose that the object of the regulative concept of the organism is realized in nature as a precondition for reflectively judging nature as teleological. Our presupposition about the possibility of organisms in nature should take the form of a positive belief in the existence of the organism. Kant is clear that there is evidence for believing in organisms. Though we have a considerably firmer grasp on the mechanism of

nature, Kant does not outright reject the possibility that nature and natural products are purposive. Nowhere does he state that organisms are a mere fiction. And while we might be tempted to infer, based on certain interpretations of certain passages, that we cannot say whether organisms can exist one way or the other, Kant is adamant that nature *suggests* its internal purposiveness to us; that nature furnishes us with examples of this purposiveness; that experience leads us to its internal purposiveness; and that we *find* this internal purposiveness in nature. Although we never empirically cognize the inner purposiveness of nature and natural products, Kant's philosophy does not confine us to a mechanistic reading of the internal purposiveness of natural products.

We must presuppose that there are organisms in nature in order to make teleological reflecting judgments about nature, and we ought to regard this presupposition as a belief about nature and natural products. Reflecting judgment generally is not a mental act that lacks any reference to entities beyond the subject or the subject's faculties. Such judgments track the relation between a given particular (or given particulars) and the interactions of our mental faculties, and Kant affirms that reflecting judgments cannot be blind and arbitrary, but ought to agree with nature. By believing that the object corresponding to our regulative concept of the organism exists, our teleological reflecting judgments are neither arbitrary nor blind. Moreover, the theoretical pursuits we form on the basis of these judgments are neither contradictory nor absurd. Belief in the existence of the organism forms the basis for a legitimate use of teleological reflecting judgments in our empirical investigations of nature.

5. Conclusion: Assessing the systematic implications of a non-mechanistic reading

In conclusion, I want to situate my non-mechanistic reading within the grand scheme of Kant's philosophy in two ways. One, I want to emphasize that a non-mechanistic reading sits more

comfortably with Kant's transcendental idealism than a mechanistic one. The mechanist leaves open the possibility that there are no organisms in nature just so long as we accept that the Laws of Mechanics exhaustively explain what an object is. However, a noteworthy implication of Kant's transcendental idealism is that the Laws of Mechanics do not give us an exhaustive picture of what an object is. To take just one example, Lucy Allais's interpretation of Kant's transcendental idealism stipulates that objects of outer sense have "intrinsic natures", and because physics cannot explain these natures, it leaves us with a depiction of the world that is "not ontologically complete or self-subsistent" (Allais 2015, 242). We need not subscribe to any one interpretation of Kant's transcendental idealism for to support this claim, either.[73]

Though a mechanistic account of nature gives us the empirical scientific picture of what the organism is, it does not give us an exhaustive ontological account of the thing we label an organism. The understanding is a key ingredient in empirically cognizing the activity of the organism, which is present to us in outer sense and explainable in terms of mechanism. But this perspective does not furnish an "ontologically complete" picture of what an object is, for it neglects any features of or perspectives on the object we do not cognize. We have seen that, while we cannot cognize the causality characteristic of an organism, we still have the grounds to at least theoretically believe that there are organisms in nature.

Bringing mechanistic and non-mechanistic readings of Kant's doctrine of nature into conversation with his transcendental idealism shows us that each reading has downstream consequences for the status of the organism. By holding that we can know there are no organisms

[73] While Allais maintains that physics cannot give us a complete picture of objects in the world because it does not describe their intrinsic natures, other commentators articulate the same point without appeal to intrinsic natures. For instance, the flavor of transcendental idealism defended in Karl Ameriks' (2000) *Kant's Theory of Mind* similarly maintains that explaining an object as it appears to us does not give us an ontologically complete picture of it (see p. 7).

in nature, the strong mechanist banishes organisms from nature; likewise, the moderate mechanist's belief that mechanism may one day give us a complete explanation seems to leave the organism in the realm of things-in-themselves. But the non-mechanist affirms that there are organisms *in* nature. An object in nature can be fully explained by the laws of physics *qua* object of empirical cognition, but there is more to an object in nature than what appears to us in outer sense. We have good reason to believe that some objects act and are organized purposively. While we do not have direct cognitive access to or knowledge about these activities and structures, nowhere does Kant bar us from placing the target of our belief in nature. This points us to the possibility that cognition does not even give us an ontologically complete understanding of *natural products*.

A second way in which the non-mechanistic reading affects Kant's broader philosophical system is that it helps explain his proof of the existence of God in the Appendix to the Critique of Teleological Judgment. Earlier, I mentioned that there are various species of belief and several of them may accurately apply to the organism. In accordance with this, Kant sometimes seems to state that for *moral purposes*, we must believe in the existence of the organism. Concisely, the Appendix's moral proof of God that suggests that if we deny the existence of the organism, we deny the existence of God. Thus, for the sake of satisfying our highest moral interests, we ought to *morally believe* in the existence of the organism. A moral belief in the organism blocks any premature denial of the possibility of proving God's existence, paving the way for a critically qualified teleological proof of the existence of God on moral grounds. Furthermore, a moral belief is a commitment that must be more robust than a flaccid agnosticism, which states that it either may or may not be the case that there are organisms.[74] While we can never determinately judge

[74] For more on my views on the Methodology section and how those views line up with the extant literature, see Appendix I.

that a thing is an organism or definitively know that organisms exist in nature,[75] it is still possible to (and necessary that we) maintain a moral belief in the existence of the organism. Adequately justifying this reading of the Appendix demands a future paper of its own.

Finally, a non-mechanistic understanding of nature has consequences for Kant's philosophy of science. On my reading, Kant urges us to endorse a theoretical belief that there are entities driven by an internally purposive causality in nature. This non-mechanistic causality is not reducible to the mechanistic causal explanations emblematic of Newtonian physics. A science that seeks to understand life – i.e., biology – is tasked with studying the effects of this internally purposive causality in nature, and it is therefore built atop a belief in the existence of this causality. This does not mean that such a science is built on a fiction or mere epistemic projections. Rather, Kant is indicating that some disciplines – specifically, those that depend upon regulative principles or ideas, such as psychology, chemistry, and in this case biology - require practitioners to adopt a firm commitment to the existence of that which they seek to explain. As long as practitioners collectively hold this rational belief, such a science like biology can have an intersubjective validity. A non-mechanistic reading of Kant's philosophy of nature should lead us to reexamine what counts as a natural science for Kant; even those disciplines that Kant does not count among the ``proper'' sciences have a unique role in helping us understand nature. More work needs to be done to examine this expanded conception of Kantian natural science in detail. For the time being, I only emphasize the point that Kant gives us the tools to scientifically study the internally purposive activity and structure of those natural phenomena we identify as living things.[76]

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[75] See *CPJ* §74.

[76] In this respect, my account follows Jessica Williams in maintaining, against the consensus, that Kant is an *anti*-reductionist about the special sciences. My reading emphasizes that Kant does not rule out an anti-reductionist approach to life science along ontological, explanatory, and methodological grounds (see "Kant on the Special Sciences," Section 5). Again, more work needs to be done to explore how Kant's views on life science interact with his professed preference for research programs that reduce all of the special sciences to mathematical physics (see *MFNS* 4:469).

Presently, we can reflect on what we have accomplished here. Above, I argued that, if mechanists were right, we would have trouble explaining Kant's frequent and direct remarks about the mechanical inexplicability of organisms. If all organisms are of the same kind as inanimate objects, then it would turn out that those objects we take to be organic are not mechanically inexplicable at all. To make matters worse, if we could definitively prove organisms do not exist, it would make no sense to assume that organisms exist, and without such an assumption, we have no basis for a moral proof of the existence of God, as it is framed in the Appendix of the Critique of the Teleological Power of Judgment. Against the strong mechanist, we have seen several reasons for denying the claim that we can know there are not organisms in nature. Against the moderate mechanist, Kant can be read as promoting theoretical (and perhaps moral) belief in the organism. We must commit to the existence of the organism in certain scientific pursuits (and to avoid rendering nature a moral desert).

What my arguments here show is that, although we cannot empirically cognize the organism or know that there are organisms in nature, we must believe that there are. By believing in the organism, we can commit ourselves to the possibility that there are organisms without ever claiming that it is possible to empirically cognize them. Nature is something more than a nexus of merely mechanistic causes. Just as "the proposition: that a human being is itself a machine, is utter foolishness" (*LM* 28:449), so too is the proposition that nature is itself a machine.

Conclusion. Beyond Mechanism

In the *Critique of the Power of Judgment*, Kant claims to have proven the objective reality of freedom and to have bridged the incalculable gulf between freedom and nature left over by the first two *Critiques.* Philosophers writing in the wake of Kant have enabled a collective skepticism towards these results of the third *Critique*, for they have historically favored a mechanistic interpretation of Kant's doctrine of nature. According to this lineage, nature is wholly mechanistic while freedom and reason are purposive. While there is a certain purposiveness inherent in our mental lives, nature is thoroughly mechanistic. The deep structural dissimilarity between these two domains makes it unlikely that the incalculable gulf can be bridged.

As just one means of salvaging Kant's stated mission and conclusion in the third *Critique*, I have motivated the possibility of mounting a non-mechanistic interpretation of nature in Kant's philosophy. My non-mechanistic interpretation holds that we are justified in believing that there is internal purposiveness in nature, though we can never empirically cognize this purposiveness or know that such purposiveness is out there. Our belief that this form of causality can exist in nature makes it easier for us to see how Kant can claim that freedom (a non-mechanistic, internally purposive form of causality) exists in and influences nature.

While I have aimed to defend a more modest form of non-mechanism, I am aware that the evidence I have provided can lend itself to a stronger form of non-mechanism. For instance, future readers might notice that Kant's remarks about the examples of purposiveness exhibited by nature lend themselves to direct perceptual awareness of the purposiveness of nature.[77] Such passages may form the basis for a reading of Kant's doctrine of nature that draws it *much* closer to those of

[77] I discuss these passages in Chapters 3-5 directly above.

Schelling and Hegel, who essentially held that we do have direct cognitive access to the purposiveness of nature.

Again, my aim has been much more modest. Kant's critics and interpreters have overwhelmingly favored a mechanistic interpretation of his doctrine of nature. By articulating a reading of Kant that allows us to believe that there are non-mechanistic, internally purposive organized entities in nature, several new insights come into view. One, a non-mechanistic reading provides us with a novel account of how Kant promises to bridge the incalculable gulf between freedom and nature. By forming the positive belief that there are internally purposive entities in nature, it is possible to conceive of more sophisticated forms of end-directed activity (e.g., the activity of a human being who, endowed with the faculty of reason, structures their life in accordance with ends that cannot possibly be realized in a single lifetime) as embedded in and influencing nature, too. Two, I have wanted to show that this reading of Kant significantly *softens* him. On my non-mechanistic reading, Kant urges us to believe that non-human entities like animals and plants are alive. The systematic commitments underpinning Kant's picture of nature make these entities out to be more than just mechanical beasts and lifeless vegetables. There is life in nature, and that life extends all the way down to cruder, sub-rational organisms. Last, my reading offers a path to a new interpretation of the purpose of existence according to Kant. In *The End of All Things*, Kant argues that human beings feel compelled to posit a final end of existence because, if this "final end is not to be achieved, then creation itself appears purposeless, like a play having no resolution and affording no cognition of any rational aim" (*End* 8:331). A non-mechanistic understanding of Kant shows us that his philosophy has yet another avenue for affirming that existence is *purposeful.* By observing the purposive organization of nature and realizing the limits of reducing certain kinds of non-mechanistic activity to mechanistic principles, we stave off the

existential malaise that might ensue from contending that the purposive activity we encounter in nature is completely reducible to mechanistic principles (i.e., that nature is ultimately *purposeless*). Believing that internal purposiveness exists in nature is another gateway for conceiving of existence as purposeful, as something more than a "play having no resolution."[78] Overall, I hope to have evoked a picture of Kant's philosophy of nature that separates him from his mechanistically inclined Early Modern predecessors and draws him closer to German Idealists and Romantics, who reserved a more robust, ineliminable place for living creatures in nature.

[78] For further discussion of the existential implications of this late essay, see Ameriks 2019, sec. 5.4.

EPILOGUE

Appendix I. From organisms to God: Kant's non-mechanistic moral philosophy

Above, I have defended of a non-mechanistic interpretation of Kant's doctrine of nature. According to my non-mechanistic reading, Kant's encourages the formation of a strong, positive commitment to the existence of organisms in nature. This commitment takes the form of a *belief* in, rather than knowledge about, the existence of organisms in nature. A non-mechanistic reading contradicts prevailing mechanistic readings of Kant, which maintain that we should either believe that nature is entirely mechanistic or that we can know nature is entirely mechanistic. From the perspective of the tools and problems of Kant's theoretical philosophy, there are complications with the mechanistic reading and straightforward reasons to adopt a non-mechanistic reading.[79]

The goal of this essay is to lend further support to the non-mechanistic reading by exploring the *practical* grounds for such an interpretation. According to my reading, the high-reaching moral goals of the Methodology section of the *Critique of the Teleological Power of Judgment* are not even possible unless we believe in the organism. The sense of "belief" I have in mind here is connected to Kant's discussion of the term in the *Canon of Pure Reason*, from the Transcendental Doctrine of Method of the *Critique of Pure Reason*. I follow Andrew Chignell in claiming that belief is a mode of assent that has objectively insufficient but subjectively sufficient grounds. More specifically, a subject has an incentive to believe in something on the basis of *non*epistemic merits – "a property of an assent that makes it valuable or desirable for a subject—given his or her needs, interests, and goals—but which does not do so by way of directly indicating that the assent is true" (Chignell 2007, 334). There are also specific species of belief, according to Chignell, one of which is *moral* belief.

[79] See sections 3-4 of Chapter 6.

According to my non-mechanistic reading, an important task of the Methodology is to establish the claim that we must *morally believe* in the organism. Lacking such a belief, we cannot attain the absolutely necessary moral ends of establishing that our freedom impacts nature and that God exists. While we can never determinately judge that organisms actually exist in nature, it is still possible to (and necessary that we) maintain a *moral* belief in this proposition.

In very condensed form, here is the story of the Methodology I tell below. Organisms exhibit an internal purposive unity. If the purposive unity represented by an organism is not possible in nature, then an intelligent, supreme world-cause did not design nature after all. Conversely, if an intelligent world-cause did design nature and its laws, organisms are possible. Many commentators claim (or are open to the claim) that, for Kant, there cannot be organisms in nature. In some sense, this is right. Kant insists that we can never determinately judge that there are organisms in nature. Nevertheless, assuming the truth of the abovementioned conditional, affirming that organisms do not exist entails a denial of the possibility of a supreme, intelligent world-cause. Yet we (according to Kant) have a deep-seated moral interest in ensuring that an omniscient world cause is possible.[80] For the sake of satisfying this moral end, I argue that we must *morally believe* in the existence of the organism in nature. This moral belief blocks any premature denial of the possibility of proving God's existence, paving the way for a critically qualified teleological proof of the existence of God on moral grounds.[81]

[80] See, e.g., AK 5:437-9 and sections §§85-86 of the third *Critique*. In this part of the Methodology, Kant discusses how our reflections on the possibility of ends in nature seem to lead us to the idea of a highest world-cause.

[81] In attributing this position to Kant in the Methodology, my reading aligns with that of Naomi Fisher (2018), who convincingly argues that the Methodology does not represent a standalone piece of writing only tenuously connected to the main body of the third *Critique*. For contrasting approaches to the function of the Methodology, see Goy 2014, Guyer 2014, and Tomasi 2016. It is worth noting that the reading developed here does have a feature in common with the orthodox reading of the Methodology – namely, it takes assembling a proof of God's existence to be the chief task of this section. Of course, the emphasis on the necessity of a moral belief in the organism is original to what follows here.

My defense of a non-mechanistic reading of the Methodology takes the following form. Section 1 introduces the goals of a "Methodology" more generally and the aims of the Methodology of the *Critique of the Teleological Power of Judgment* in particular. Section 2 gives an overview of the moral proof of the existence of God in the Methodology. Section 3 recaps the core tenets of mechanistic readings of Kant's doctrine of nature to walk us through how a mechanist would read the Methodology. I also discuss issues with both moderate and strong mechanistic readings of the Methodology. Section 4 defends my non-mechanistic reading of the Methodology. The definitive characteristic of my non-mechanistic reading of the Methodology is the claim that we must morally believe in the existence of the organism in order for Kant's moral proof of the existence of God to work. In Section 5, I conclude by reflecting on how my reading of the Methodology explains why Kant is justified in concluding that he has proven the objective reality of freedom at the end of the third *Critique*.

1. What is the goal of a methodology?

What is the goal of a Doctrine of Method (or a "Methodology", as Kant sometimes calls it)? Perhaps it is the case that, as Norman Kemp-Smith commented on the *First Critique*'s Doctrine of Method, such a doctrine's "entire teaching…has already been more or less exhaustively expounded in the earlier divisions" of the text of which it is a part (Kemp-Smith 1992, 563). Closer inspection reveals many reasons to reject the notion that a Doctrine of Method is gratuitous. More recently, A.W. Moore has argued that the Doctrine of Method of the *First Critique* is significant because it "contains Kant's most sustained and most reflective account of what is generally regarded as *the* distinctive style of argument that he initiates in the *Critique*: transcendental argument" (2010, 312). In other words, the methodology section of this text contains indispensable

insights regarding the style of proof Kant takes himself to be performing and the kinds of conclusions that can be drawn from such proofs. Indeed, a doctrine of method (or methodology) in general is broadly concerned with these issues – namely, what is the nature of a transcendental proof and what is the nature of conclusions drawn from those proofs. A methodology is indispensable because it clarifies the lessons that we can take away from the critique of any faculty. Put differently, a methodology provides a plan for the proper use of the faculty in question (e.g., that of pure reason, practical reason, aesthetic judgment, etc.; see A707/B735) in light of the limits of that faculty.

Without poring over all its details, we can appreciate how this project is carried out in the respective parts of the Doctrine of Method in the first *Critique*. In the Discipline of Pure Reason, Kant is primarily concerned with spelling out the limits of our legitimate use of pure reason, so as to prevent it from committing perilous dialectical errors. The Canon of Pure Reason supplements this negative task by outlining the positive uses that remain for pure reason once we safeguard it from error (A795/B823ff.). The Architectonic of Pure Reason gives us a sense of how we can go about creating a systematic unity of cognitions by means of reason, thereby showing how reason contributes to establishing a science (A834/B862). The History of Pure Reason casts a "cursory glance" at the "whole of [pure reason's] labor hitherto" (A852/B880), sketching the task that remains for pure reason. From this bird's eye vantage point, we can see that the point of the methodology section is to reinforce the limits and sketch the forthcoming task of a particular faculty.

In the *Critique of Practical Reason*, we see that the goal of a doctrine of method is not only malleable, but tailored to the faculty in question: "Here the doctrine of method is understood, instead as the way in which one can provide the laws of pure practical reason with *access* to the

human mind and *influence* on its maxims, that is, the way in which one can make objectively practical reason *subjectively* practical as well" (*CPrR* 5:151). By means of "observations anyone can make", Kant intends to show that our minds have a "receptivity to a pure moral interest and hence the moving force of the pure representation of virtue" (*CPrR* 5:152) and from there to prove that pure practical reason has a particular sort of "access to the human mind." Once he has established the particular way in pure practical reason influences the human mind, Kant can then develop a plan for the cultivation of the moral subject (*CPrR* 5:154-5). Again, the goal here is to demarcate the limits of the proper use of a faculty (pure practical reason) and develop a plan for extending its use given its limits.

At this point, we see a theme developing. "On the methodology of taste", the appendix to the *Critique of the Aesthetic Power of Judgment*, adds another wrinkle to the notion of methodology we should carry into the second half of the third *Critique*. The topic of this half of the *Critique* – beautiful art – cannot be studied scientifically. The goal of the doctrines of method in the first two *Critiques* paved the way for natural science and a metaphysics of morals. Here, Kant's goal is to develop the path for bringing about beautiful art in the studio and in society. In the studio, "the master must demonstrate what the student is to do and how he should accomplish it" (*CPJ* 5:355). This is not achieved by handing the student a universal principle under which they must subsume a predicate. Rather, the master cultivates the student's genius and the freedom of their imagination by presenting them with examples of great art and criticizing their student's technique. Beautiful art is also useful insofar as it enhances humanity's "universal **feeling of participation**" and one's ability to communicate their inmost self, enabling the cultivation of our common sense and taste (see *CPJ* §40). Importantly, the methodology of taste has an important *moral* and *instrumental* role: "it is evident that the true propaedeutic for the grounding of taste is

the development of moral ideas and the cultivation of the moral feeling" (*CPJ* 5:356). Beholding and reflecting upon beautiful art is, in some way, supposed to prepare us to be better moral agents.

The Methodology of the *Critique of the Teleological Power of Judgment* is a complicated and challenging portion of a complicated and challenging text. Yet, in some ways, it represents the zenith of Kant's Critical project. The task of the third *Critique*, as Kant lays it out in the Introduction, is to bridge the "incalculable gulf" between nature and freedom (*CPJ* 5:176). By the end of the Methodology, Kant claims to have proven that "freedom is the only concept of the supersensible that proves its objective reality (by means of the causality that is thought in it) in nature" (*CPJ* 5:474). In other words, Kant takes himself to have completed the project he set out to complete.

Like the Methodology of Taste, the Methodology of the Teleological Power of Judgment depicts the limits and proper application of a particular faculty – i.e., the faculty of teleological judgment – while showing how the object of this faculty – in this case, the organism and not beautiful art – serves an indispensable moral purpose. Like its cousins from the first two *Critiques*, the Methodology critically circumscribes the limits of teleological judgment and prescribes a number of legitimate uses for the faculty. However, like its sibling – the Methodology of Taste – the Methodology of the Teleological Power of Judgment is an instrument for morality, giving Kant a path to a proof of the existence of God. Indeed, the main goal of this Methodology is to establish a moral proof of the existence of God that will help ensure the "objective reality" of freedom. In other words, Kant wants to show us that it is possible for freedom to have an effect on nature. In order for freedom to have an effect on nature, Kant must mount and defend a moral proof of the existence of God. This is precisely why the heart of this Methodology is dedicated to such a proof.

2. The third *Critique*'s moral proof of the existence of God

Despite his insistence that "one could easily adapt" his moral proof of the existence of God "to the form of logical precision" (*CPJ* 5:450), Kant's proof is complicated. Before tracing each step of the proof, it is perhaps useful to clearly state the conclusion Kant claims to have reached – namely, "we must assume a moral cause of the world (an author of the world) in order to set before ourselves a final end in accordance with the moral law; and insofar as that final end is necessary, to that extent (i.e., in the same degree and for the same reason) is it also necessary to assume the former, namely, that there is a God" (*CPJ* 5:450). Kant quickly qualifies that this conclusion does not provide the concept God with objective validity, but only that, if moral thinking is to be consistent, we must assume that God exists (*CPJ* 5:450-1n). Kant claims to have reached the conclusion that moral action in the world is possible only if we assume that there is a supreme author of the world. Denying the existence of such a supreme author is tantamount to blocking the possibility of morality. Accordingly, his strategy for morally proving the existence of God is to establish that there is action in accordance with the moral law. For as long as Kant establishes this, then he can justifiably infer that this action has an unconditioned cause, and that unconditioned cause must be a supreme moral cause of the world.

The first step in Kant's proof is to assume that things conditioned in accordance with ends exist. For every conditioned thing, Kant reminds us, "one can seek the supreme ground for this causality, thus the unconditioned for what is conditioned" (*CPJ* 5:448). We can apply this search for an unconditioned cause to one of two orders: either the physical or the teleological order. In the teleological order, which is at issue here, we assume that there are things conditioned by ends and seek the "final end" of that conditioned thing. Notice, then, that the first step in Kant's proof for the existence of God is significant for my purposes – namely, things that are conditioned in

accordance with ends exist. Without this assumption, we could not seek their unconditioned cause – i.e., a supreme intelligent world author.

As we trace back the causal chain to an unconditioned cause, Kant says that "the most common human reason is compelled" to the following claim: "if reason is to provide a **final end** *a priori* at all, this can be nothing other than the **human being** (each rational being in the world) **under moral laws**" (*CPJ* 5:448). By this point, Kant has repeatedly asserted in previous sections (§§82-84, 86) that the human being, considered as a moral being, must be the final end of nature's purposiveness. Here Kant supplements this claim to a greater degree, reasoning that, "if the world consisted entirely of lifeless beings or even in part of living but nonrational beings, then the existence of such a world would have no value at all, because there would exist in it no being that has the slightest concept of value" (*CPJ* 5:449). So, we must assume that the world just does consist of living beings that act in accordance with ends. Furthermore, beings that act in accordance with ends could either be considered relative ends in the world, or beings that have value relative to another purposively acting thing, or absolute final ends. Only beings that recognize and act in accordance with moral laws can be absolute or final ends of nature, for the moral laws "prescribe something to reason as an end without a condition" (*CPJ* 5:449). Assume that there are no beings in the world that could act in accordance with moral laws. If this assumption is held true, "there is either no end at all for the existence of a world in its [a rational moral being's] cause, or it is grounded in an end without a final end" (*CPJ* 5:450). Kant flatly denies the first disjunct as a possibility. As for the second, we have already seen that, as long as we assume there are things conditioned in accordance with ends, there must be a final end. Thus, Kant maintains that there must be beings in the world that could act in accordance with moral laws.

Insofar as action in accordance with the moral law is free action, Kant thinks that it would be absurd to claim that free activity can make an impact on the world if the highest good is unattainable in the world. As he puts it, we can only strive after "the **highest good in the world**", the pursuit of which is only possible through freedom (*CPJ* 5:450). Now, if we were to conceive of ourselves as merely natural beings, the highest final end we could set for ourselves is "the highest physical good that is possible in the world", or happiness (*CPJ* 5:450). This presents an issue for us. On the one hand, it seems like we are limited to pursuing our own happiness and are barred from attaining the highest good – after all happiness is a satisfaction that could be possible in the world while the highest good appears to be ever-beyond our reach. On the other hand, we are plainly obligated to pursue the highest good in the world, although it does not seem possible. Kant expresses this quandary when he writes, "the concept of the **practical necessity** of such an end [i.e., the highest good], by means of the application of our own powers, is not congruent with the theoretical concept of the **physical possibility** of producing it" (*CPJ* 5:450). The physical world's apparent inhospitability towards our pursuit of the highest good requires us to "connect our freedom with any other causality (as a means) than that of nature" (*CPJ* 5:450). In other words, we may be able to make sense of our pursuit of the highest good if some supernatural causal power has designed nature so that it can serve this pursuit.

Assuming the existence of God allows us to overcome this impasse and establish that the highest good could be possible in the world. If there is no supreme world-cause that has fashioned nature and its laws in such a way that it is possible to bring about the highest good, then it would make no sense to act for the sake of the highest good. Thus, in order for moral action to make sense to an agent, "he must assume the existence of a **moral** author of the world, i.e., of God, from a

practical point of view, i.e., in order to form a concept of at least the possibility of the final end that is prescribed to him by morality" (*CPJ* 5:453).

However, recall that the entire proof presupposes that there is a condition for which we can seek an unconditioned cause. In this case, we are operating within a teleologically ordered nature. What is conditioned has been conditioned in accordance with ends, just as the unconditioned cause of our activity is teleological. Kant's proof, in other words, *requires us* to assume that there are objects that have been conditioned by a final causality. For our purposes, this lends further support to the thesis that we must, for the sake of morally proving the existence of God, assume that there is internal purposiveness in nature – i.e., that there are organisms.

Formulating *any* reading of the Methodology requires us to explain how freedom can be objectively real. Explaining how freedom can be objectively real requires us to explain how Kant's moral proof of God begins with organisms and leads us to God. Let us now turn to a consideration of how the mechanist would lead us along this path – if they can at all.

3. Mechanistic readings of the Methodology

There are two kinds of mechanistic reader of Kant's doctrine of nature. According to the moderate mechanist, Kant does not give us the tools to know whether there are organisms in nature. Citing this lack of epistemic clarity, the moderate mechanist states that we are warranted in our belief that mechanism can one day exhaustively explain nature.[82] A strong mechanist argues that, since the laws of physics give us a complete picture of all of material nature, we can know that there are no organisms in nature.

[82] See Peter McLaughlin's *Kant's Critique of Teleology in Biological Explanation* and "Mechanical Explanation", John Zammito's *The Genesis of Kant's* Critique of Judgment, Rachel Zuckert's *Kant on Beauty and Biology*, Hannah Ginsborg's *The Normativity of Nature*, and James Kreines's *Reason in the World*.

While I will not rehash the general complications with the mechanistic readings of Kant's doctrine of nature here,[83] it is rather obvious how these readings of the Methodology would block Kant from achieving his goals in that section. Recall that we must assume there are beings organized in accordance with purposes in nature for the moral proof of the existence of God to commence. If we deny that there are such entities, we cannot affirm that the human being is the highest of end nature. If we cannot assume that the human being is the highest end of nature, we cannot assume that the highest end is attainable in the world. If the highest end is not attainable in the world, there simply is no reason to posit the existence of a God that has designed the world such our free activity is possible in it.

By adopting a mechanistic reading of any variety, one triggers a cascade of negated consequents and undermines Kant's proof of the moral existence of God. The strong mechanist asserts that we can prove there are no organisms in nature and thus that nature is entirely mechanistic. From knowledge of the fact that there are no objects in nature designed in accordance with purposes, we cannot affirm that there is a highest end of nature at all. Devoid of any ends whatsoever, nature is a moral desert – God does not (perhaps cannot) intervene to design nature such that it is amenable to the free pursuit of our highest ends.

Likewise, the moderate mechanist allows for the belief that nature is governed solely by the laws of mechanism and therefore that there are no organisms in nature. As we see here, adopting such a belief comes with a cost – namely, we compromise the moral proof of the existence of God and risk undermining the entire project of the third *Critique*. No matter which mechanistic line we adopt, such a reading makes it difficult – if not impossible – to see how Kant establishes

[83] See "Chapter 6" sections 3 and 4.

the existence of God and subsequently the objective reality of freedom. Adopting a mechanistic doctrine of nature undercuts the entire critical project.

4. A non-mechanistic reading of the Methodology

Luckily, another reading of the text is available to us. According to a non-mechanistic reading of Kant's doctrine of nature, we are justified in assenting to the claim that organisms exist in nature. This assent takes the form of a belief.

Belief is a "firm, positive, and voluntary attitude that is subjectively sufficient$_2$ for a particular subject in a particular circumstance, given his or her interests and ends, and that has implications for the subject's rational action, assertion, and deliberation" (Chignell 2007, 359). Assent is a mental attitude involving objective grounds and subjective grounds of assent. Ideally, an individual has *sufficient* objective and subjective grounds for assent, the result of which is knowledge. The right kinds of objective grounds are "perceptual, memorial, or introspective states" (Chignell 2007, 327), and those states serve as sufficient objective grounds only if they render the proposition in question "probable to a degree that licenses assent with a moderate-to-high degree of probability" (ibid). Principled observation, data compiled on the basis of those observations, reflection on the legitimacy of the data, and so forth are ingredients that contribute to the formation of sufficient objective grounds. Subjective grounds consist in the "subject's own determination that the assent is based on sufficient objective grounds" (Chignell 2008, 328), and those grounds are sufficient only if "the everyday process of using memory, a priori reasoning, introspection, and so forth" allows the subject to establish a high degree of confidence in the sufficient objective grounds motivating the proposition in question. Subjective grounds are one's level certainty with respect to their objective grounds. Subjective grounds that are sufficient$_2$ are

grounds with some nonepistemic merits. For instance, Kant thinks that we must believe in God in order to explain the purposive unity of nature.[84] Belief is a state characterized by a lack of sufficient objective grounds – we cannot appeal perceptual, memorial, etc. states to show that the propositions we believe in are probable with a moderate to high degree of certainty. Beliefs are subjectively sufficient$_2$, meaning that we have nonepistemic reasons for desiring or valuing the truth of these assents, though we have no direct route to knowledge of their truth.

The relevant variety of belief for a non-mechanistic reading of the Methodology is *moral* belief. Andrew Chignell defines this kind of belief as follows:

> ***Moral belief:*** S is permitted to form a Moral Belief that *p* if and only if
> a) S has set an "absolutely necessary" *moral* end *e*,
> b) A necessary condition of S's attaining *e* is S's having a firm assent that *p*, and
> c) *P* is a logically possible proposition for or against which S cannot have subjective sufficient grounds. (2007, 356)

The central task of the Methodology of the *Critique of the Teleological Power of Judgment* cannot come into fruition unless we *morally believe* in the organism. Organisms exhibit an internal purposive unity. If the purposive unity represented by an organism is not possible, then an intelligent, supreme world-cause did not design nature after all. Conversely, if an intelligent world-cause did design nature and its laws, organisms are possible. Most commentators have claimed we are justified in knowing or believing that there are no organisms in nature. However, because we according to Kant have a deep-deep-rooted moral interest in proving that an omniscient world cause is possible[85] and because a belief in the organism is indispensable for such a proof, these commentators deny Kant any path to succeeding in this proof.

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[84] See Chignell (2007), 334 and A826/B854.

[85] In §86, Kant states that we have an unmistakable in-built "moral predisposition as the subjective principle not to be content with natural causes in the consideration of the purposiveness of the world but rather to base it in a supreme cause ruling nature in accordance with moral principles" (*CPJ* 5:447). It is only by asserting that there is such a supreme cause that we can explain why we strive for a universal highest end although we will never attain it in nature. By means of reason and its "moral principles", we produce the concept of God; the "inner **moral** vocation of human existence" prompts us to "conceive of the supreme cause, for the final end of the existence of all things" (*CPJ* 5:447).

We must morally believe that there are organisms in nature because a failure to do so spells the failure of Kant's moral proof of the existence of God. This moral belief directly contradicts the strong mechanist's claim that we know there are no organisms and the moderate mechanist's claim that we can believe there are no organisms. Despite lacking empirical cognition of the causality characteristic of an organism and knowledge that organisms exist, it is *necessary* that we maintain a *moral* belief in the existence of the organism.

Justification for this moral belief can be gleaned as early as the opening sections of the Methodology. Kant shows us that, if we do not conceive of there being organisms in nature, we cannot conceive of nature as a system of ends. Moreover, if we do not conceive of nature as a system of ends, we cannot posit an intentionally acting, teleological, and intelligent final end of nature, or that being for which nature as a system of ends exists, i.e., the human being. At the outset of §86, Kant reminds us that without the human being, there would be no final end in nature and nature would be nothing but a "mere desert, existing in vain and without final end" (*CPJ* 5:442), for "a good will is that alone by means of which his existence can have absolute value and in relation to which the existence of the world can have a **final end**" (*CPJ* 5:443). It is the human being's possession of a will, and their corresponding status as a moral being, that instills them with desires loftier than those associated with mere happiness, and such lofty desires allow the human being to use nature for the sake of ends that transcend nature. Because the human being alone is capable of such activity, they must be the final end of nature.

Notice that the resulting conception of God is not based on theoretical grounds, but on practical or ethical ones. It is our conceiving of the human being as a *moral* being that explains how they can serve as the ultimate end of nature. Furthermore, the moral human being's pursuits only makes sense if we assume that there is an intelligent world-cause who designed nature in such a way that it could serve a final end. Whereas beginning with our theoretical observations about end-directed activity in nature only presented us with specious proofs for the existence of God, reflecting on the human being's status as the final end of nature drives us to conceive of a God that designs a world that is suitable to moral activity.

This picture of the human being and their relationship to nature as a system of ends leads us to the notion of a supreme principle of the connection of all the ends in nature:

> Now since we recognize the human being as the end of creation only as a moral being, we have in the first place a ground, at least the chief condition, for regarding the world as a whole interconnected in accordance with ends and as a **system** of final causes, but, above all, a ground for a **principle** for conceiving, for the relation of natural ends to an intelligent world-cause that is necessary given the constitution of our reason, of the nature and the properties of this first cause as the supreme ground in the realm of ends, and so for determining the concept of it – which physical teleology, which could only produce concepts that are indeterminate and for that very reason unsuited for both theoretical as well as practical use, could not do. (*CPJ* 5:444)

In its attempt to infer, by theoretical means, from the presence of ends in nature to the existence of God, the physicotheologist faltered. But if we begin by recognizing that the human as a *moral* being is the end of all creation, we find two things. One, we find that a human considered as a moral being is a necessary condition for "regarding the world as a whole interconnected in accordance with ends as a **system** of final causes" (ibid). This much is consistent with Kant's previous remarks on the relationship between nature as a system of ends and the human being as its final end. In addition, considering the moral being as a final end of creation serves as a "**principle** for conceiving…of the nature and the properties of" a first cause of nature that serves as the "supreme ground in the realm of ends" (ibid). While reflecting on the physical ends of nature cannot secure a path to the existence of God, reflecting on the human being's status as a moral agent can.

Again, this line on the Methodology should suggest that, if we deny the existence of the organism, we deny the existence of God. But it is even more telling that the moral proof of the existence of God offered in §87 plainly *requires* us to assume that objects conditioned in accordance with ends exist, for it is only by this means that one can "one can seek the supreme ground for this causality, thus the unconditioned for what is conditioned" (*CPJ* 5:448). So, we

must assume the existence of the organism for the sake of mounting a successful moral proof for the existence of God. If we deny the existence of the organism, we cannot even get a moral proof for the existence of God underway. More forcefully, denying the possibility of the organism results in the denial of the possibility of there being purposiveness in nature; denying the possibility of purposiveness in nature rules out the possibility that nature exists for the sake of some final end; and ruling out the possibility that nature exists for the sake of some final end forecloses the possibility of a supreme intentional world-cause that designs nature and its mechanical laws in such a way that it is compatible with the pursuit of final ends.

Kant's 1786 essay "What does it mean to orient oneself in thinking?" might seem to suggest that assuming the existence of organisms is actually *sufficient* not *necessary* for a proof of God's existence. There, Kant clearly states, "we must assume the existence of God when we want to judge about the first cause of everything contingent, chiefly in the order of ends which is actually present in the world" (*Orient* 8:139). Notice, though, that God's existence is a necessary condition for making a judgment about the "first cause of everything contingent." A judgment about organisms and an assumption about the existence of organisms are two entirely different things. Moreover, without positing the very existence of an "order of ends which is actually present in the world", the need for an intelligent God would not even arise in the first place. After all, Kant appears to maintain that if the world were mechanistic at its very foundation and origins, the causality of a supreme and intelligent world-cause would be gratuitous. Yet, we are not only presented with cases of contingently organized natural products, but also have a moral interest in proving the existence of God. It makes sense to pursue the highest good in the world, "to prevent it [the highest good], along with morality, from being taken merely as a mere ideal" (*Orient* 8:139), only if God exists. While assuming God's existence is necessary for making judgments about

contingently organized natural products and their ultimate origins, we still must form a firm assent that organisms exist in order to get our moral proof of the existence of God started and explain the possibility of the highest good in the world. On this note, the form of assent that we adopt with respect to the organism is a Moral Belief - that is, it is necessary to assume that organisms exist to deliver on the absolutely necessary moral end of proving the existence of God. To coin a term, the organism seems to play the role of a *second-order* Moral Belief - that is, we must believe in the organism to believe in God, and our belief in God as an intelligent author gives the concept of the highest good objective reality. The very presence of "purposiveness in the world certainly *forces us* to think of a supreme causality and its causality by means of intelligence" (*CPJ* 5:483-4, my emphasis).

Overall, my interpretation represents a decisive push away from mechanistic readings of the third *Critique*. Strong mechanists overtly deny that there are organisms and consequently deny that God has designed nature in such a way that our highest ends are realizable. Moderate mechanistic readings encourage us to believe that nature can be fully explained in mechanistic terms. But if we keep the domino effect that occurs when we reject the organism in mind, we see that this is an unappealing way of interpreting the Methodology. We must rule out the possibility that organisms do not exist because adopting an attitude of unbelief, or asserting the non-existence of the organism, entails a denial of the existence of a supreme omniscient world-cause. While we can never definitively prove (or disprove) the existence of the organism or God, in the Methodology, Kant means to teach us that a belief in the organism is indispensable for moral purposes. We must believe in the organism because, otherwise, we foreclose the possibility that God made nature amenable to our highest ends.

5. Conclusion: Non-mechanism and the project of the third *Critique*

Throughout the Analytic and the Dialectic of the *Critique of the Teleological Power of Judgment*, we encounter reasons to turn away from mechanistic readings of Kant's doctrine of nature. Kant claims that nature presents us with examples of purposive unity and proper occasions to suspend the maxim that we ought to judge nature as if it is conditioned solely in accordance with mechanistic laws;[86] Kant also asserts that reason can never prove the principle that all generation of material things comes about in accordance with merely mechanical laws and distances himself from philosophies that have attempted to reduce the purposive unity of nature to "unintentional" (i.e., mechanistic) grounds.[87] In other words, these portions of the text supply us with reasons to believe that there are organisms in nature on theoretical grounds. Because of Kant's stated position, we *can* believe that there are organisms in nature.

What the reading of the Methodology laid out above adds is that we *must* believe in the existence of organisms in nature. Forming a moral belief in the existence of the organism is a necessary first step in Kant's moral proof of the existence of God. That assuming the presence of purposive entities in nature initiates the proof of the existence of God is evident even beyond the main text of the Methodology. Kant reinforces this assertion in the "General Remark on the Teleology". Following the conclusion of the main text of the Methodology, he states that the very concept of ends of nature, which is given to us "only through experience", "promises the concept of the original ground of nature" (*CPJ* 5:476). He later adds, the very presence of "purposiveness in the world certainly forces us to **think** of a supreme causality and its causality by means of intelligence" (*CPJ* 5:483-4). With assertions like this in mind, Kant solidifies his position that it is *necessary* to assume that organisms exist in order to deliver on the absolutely necessary moral end

[86] See section 3.1 of Chapter 6.
[87] See sections 3.2 and 3.3 of Chapter 6.

of proving the existence of God. On my version of a non-mechanistic reading, this assumption takes the form of a moral belief.

If we take a bird's eye view of the text, we can see that the organism plays an indispensable role in the master argument of the third *Critique*. Assuming the organism's existence is not only necessary for proving the existence of God, but demonstrating that the highest good and morality can be realized in the world. If we do not assume that organisms exist, we cannot assume that an intelligent author has designed nature such that it is compatible with our pursuit of the highest good, and if we do not assume this intelligent author, we have no way of closing the gap between freedom and nature. In the first-edition Preface to Kant's first major work immediately following the third *Critique* – *Religion within the Boundaries of Mere Reason* – Kant takes himself to have closed the gap with the moral proof of the Methodology. We can only conceive of an ultimate end of all things if God exists, and we need to conceive of an ultimate end of all things because "only in this way can an objective practical reality be given to the combination, which we simply cannot do without, of the purposiveness of freedom and the purposiveness of nature" (*Rel* 6:5). This synopsis of the argument resonates with what we have been told in the Methodology, as there the gap between freedom and nature cannot be closed by means of anything we empirically cognize, only by our belief that there is a God (*CPJ* 5:474). As I have shown above, that moral proof for the existence of God cannot even get started unless we assume that there is purposiveness in nature, or that there are organisms. Just as the moral proof of the existence of God would be impossible without a moral belief in the existence of organisms in nature, so too would the fruit of this proof (the reality of freedom) be impossible without such a belief.

Appendix II. Did Kant care about Aristotle? On §§72-73 of the *Critique of the Teleological Power of Judgment*

Sections 72-73 of the *Critique of the Power of Judgment* contain a critique of various dogmatic explanations of the purposiveness of nature. On the one hand, ``idealists'' such as the Epicurean atomists and Spinoza make teleology out to be a mere fiction, arguing that the purposiveness of nature is reducible to either "blind chance" or a necessary world-cause. On the other hand, "realists" such as hylozoists and theists brutely assert that they can prove the reality of teleology, explaining that the source of a thing's teleological structure is either a material property of the thing or a feature bestowed upon it by some intelligent world-designer. Both realists and idealists falter because they mistake claims about how we ought to *reflect upon* nature for claims about the *real constitution* of nature.

Conspicuously, one titan of teleology is missing from Kant's discussion of ``the systems'' of teleology – namely, Aristotle. Clearly, Aristotle was not an idealist like the Epicureans and Spinoza. This might lead us to surmise that Aristotle must be counted among the realists. The issue is that Aristotle was neither a theist nor a hylozoist.

This interpretive situation points us in two potential directions. In a more pessimistic mood, we may suspect that Kant completely overlooked Aristotle, whether by accident or out of indifference to the Aristotelian position. Yet, perhaps it is the case that Kant *deliberately* omits discussion of Aristotle in his definitive work on teleology from the Critical period, signaling a tacit endorsement – maybe even a critical rehabilitation – of Aristotle's explanation of nature's purposiveness.

At first glance, it may make sense to be pessimistic about Kant's philosophical relationship with Aristotle's teleology. Kant neither cites nor ostensibly paraphrases Aristotle in his seminal text on teleology. Moreover, Kant's stated remarks about Aristotle in lecture manuscripts and primary texts may suggest that Kant only had a passing familiarity with the *Corpus Aristotelicum*.[88] Nevertheless, if we adopt a particular interpretation of Kant's philosophy of nature I have developed elsewhere,[89] I conclude that it is possible to end the story of Kant and Aristotle's philosophical relationship on a happier note.[90]

The paper proceeds as follows. In the first section, I survey Kant's critiques of dogmatic explanations of the purposiveness of nature (1.1) and then consider what Kant's preferred explanation of the purposiveness of nature may be (2.2). In section 2, I do the same for Aristotle. In section 3, having shown that Aristotle's views are not adequately covered in the critiques of dogmatic teleology in sections 72 and 73 of the *Third Critique*, I conclude that there are apparently two available options. Either Kant completely overlooked Aristotle's teleology or Kant is carrying the torch of Aristotelian teleology in the *Third Critique*. More weight can be added to the latter,

[88] Consider, for instance, Kant's various remarks about Aristotle's philosophy in his *Lectures on Metaphysics*. There, Aristotle is portrayed as a philosopher who claims ``all our concepts came from the senses" (*LM* 28:232); who argues that ``concepts of the understanding are not innate but rather acquired" (*LM* 29:761); who is supposedly a direct precursor of Locke's philosophy (while Leibniz is straightforwardly a ``follower of Plato") (ibid); who states that ``nothing is in the intellect which was not first in the senses" (ibid); who ``said that all cognitions were empirical, or that they were based on the first principles of experience" (*LM* 28:542); who sets up a ``(so-called) physiology of reason, because he views a priori cognition as something that can be acquired empirically" (*LM* 29:958), etc. In other words, Kant brazenly claims that Aristotle is something like an Early Modern Empiricist in Ancient Greece.

In the *Lectures on the Philosophical Doctrine of Religion*, Kant curiously states that ``Plato and Aristotle did maintain a pure and morally determinate concept of God" (*LPDR* 28:1126) for the sake of their moral philosophies. Kant's least controversial remarks about Aristotle in primary texts can be found in places such as the *Prolegomena to any future metaphysics* and *What real progress has metaphysics made in Germany?*, both of which associate Aristotle's theoretical philosophy with the establishment and use of categories. Rarely is text from the *Corpus Aristotelicum* cited to support or elaborate upon these interpretive claims. Conveniently, most of the philosophical positions attributed to Aristotle are phrased in Kantian terms that only dubiously map onto Aristotle's terminology.

[89] See Chapter 6 directly above.

[90] In this respect, my paper contributes to a tradition of drawing Kant closer to Aristotle than historians of philosophy typically have, following the lead of work such as Andrea Kern's (2023) "The "Original" Form of Cognition: On Kant's Hylomorphism."

optimistic conclusion if we take my non-mechanistic reading of Kant's philosophy of nature onboard. If we appreciate that Kant urges us to *believe* that there are non-mechanistic causal structures in and throughout nature though we can never *know* that this is the case, we could understand the third *Critique*'s remarks on teleology as a development of Aristotelian teleology.

1. Kant on the purposiveness of nature

1.1. Kant's critiques of dogmatic explanations of nature's purposiveness

Kant takes aim at *idealist* and *realist* explanations of nature's purposiveness. The idealist attempts to explain away nature's purposiveness – or to prove that nature's purposiveness is "at bottom entirely identical with the mechanism of nature" (*CPJ* 5:391). They achieve this either by arguing that any apparent purposiveness is really the result of a necessary world-cause (Spinozism) or by arguing that any apparent purposiveness is really the result of blind chance (Epicureanism). The realist asserts that they can prove the reality of nature's purposiveness by tracing it back to a hyperphysical intelligent author (theists) or by building purposiveness into matter (hylozoists). Before piecing together what Kant's preferred explanation of nature's purposiveness may be, let's consider his critiques of idealist and realist explanations of nature's purposiveness one-by-one.

One form of idealism grounds the purposiveness of nature in a "lifeless God." Kant associates this view with Spinoza. The view seeks to explain the connection of ends in the things in nature by demonstrating that they are actually a product of "blind necessity." However, Kant thinks that this view fails to provide a principled distinction between purposive things and non-purposive things, instead giving us a "merely childish game played with words" (*CPJ* 5:394). In other words, the Spinozist view merely asserts that purposive natural structures are really non-

purposive, but it does so without drawing a principled distinction between purposive and non-purposive structures. For this reason, it does not explain anything at all.

Another form of idealism Kant associates with the atomistic theories of Epicurus and Democritus. This view contends that the apparent purposiveness of nature is really just a product of blind chance or purely accidental. Nonetheless, like the Spinozist view, if the Epicurean is correct "nothing is explained, not even the illusion in our teleological judgments" (*CPJ* 5:393). By reducing the purposiveness of nature to the blind, accidental collision of material atoms, question of *why* the atoms took this configuration and not some other persists. The Epicurean (or Democritean) atomist is just as incapable of answering this why question as the Spinozist. Thus, all idealists fail to explain away the purposiveness of nature.

On the opposite end of the spectrum, those who claim that they can prove the purposiveness of nature is real take things a step too far. According to theists, we can establish the existence of God in a way "sufficient for the determining power of judgment" (*CPJ* 5:395). As long as an intelligent God exists, the purposive design of nature that God has furnished must also exist. However, while positing an intentional God behind nature as an article of *faith* might be an adequate ground for reflecting on the purposiveness of nature, it is not a ground for justifying the purposiveness of nature as a "objective assertion." Thus, though Kant thinks that theism is on the right track, it still promises to deliver more than it can, sliding from a maxim suitable for reflecting on nature to an objective proof of the existence of God.

Last, there are the hylozoists. This view is especially important for our purposes because someone might make the mistake of thinking that Kant sorts Aristotle into this camp. As we shall see, Kant's characterization and critique of hylozoism will reveal that Aristotle could not be counted among the hylozoists.

Hylozoism is the view that seeks to prove the reality of nature's purposiveness by showing that purposiveness is a material component of some object. Ultimately, the issue with this view is that it attempts to "endow matter as mere matter with a property (hylozoism) that contradicts its essence" (*CPJ* 5:375). Matter is only capable of being changed by external causes (*MFNS* 4:543), and, Kant adds, "the inertia of matter is, and means, nothing else than its *lifelessness*, as matter in itself" (*MFNS* 4:544).[91] In contrast to matter, there is life, or "the faculty of a substance to determine itself to act from an inner principle, of a finite substance to change, and of a material substance to motion or rest, as change of its state" (*MFNS* 4:544).[92] Whereas matter "in itself" can only be changed by external causes, a *living* substance has an internal principle of change. Moreover, insofar as matter can only undergo changes when it is affected from without, by an external cause, matter *qua* matter cannot be alive. If we take hylozoism to be a position that endows matter "in itself" with life, it is a fundamentally incoherent and contradictory position, for it holds that matter in itself both is and is not alive.[93]

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[91] Kant offers more definitions of matter in the *Lectures on Metaphysics*. In the *Metaphysik Mrongovius*, he states that "Matter is that which can be intuited in space" and continues, "By matter one always understood something passive that lies at the basis of all appearances" (*LM* 29:841). In the sense that it is passive and changeable, it is contrasted with form: "Matter and form go through all parts of philosophy. Matter is the determinable – form the determination" (*LM* 29:847-8). Later in the same lecture, Kant adds that "Matter and form are met with in every whole. Matter as the data <*data*> and form as the manner of connecting them" (*LM* 29:850). Again, mere matter is passive, acted upon from without. Form is that which determines matter and not just in any arbitrary way, but in a manner that connects given matter into a whole.

Kant gives further elaboration to this relationship between matter and life in the Psychology portions of his Lectures on Metaphysics. For example, in a proof of the immortality of the soul that "is good against materialists", Kant begins with the following premises: "All matter is lifeless, has no faculty for determining itself, and the principle of life is something other than matter" (*LM* 29:913). From this, it follows that matter "has mere receptivity or passivity." In contrast, life is a "spontaneity or the faculty for determining oneself from inner principles" (ibid). Matter, therefore, cannot have a principle of life and is instead entirely lifeless. So the body, which is completely made up of matter, cannot be the principle of life; for the human being, the principle of life must be the soul, since presumably the principle of life can only be either the body or the soul. Death, or the extinction of the body, turns out to be a "promotion of the life of the soul" (*LM* 29:914). While we can never in fact know that the substance underlying the body has life, we can infer from the fact that our body qua mere matter is lifeless to the possibility of some not-merely-material principle of life that organizes our material bodies.

[92] In my dissertation, I argue that Kant conceives of life as a thing's faculty of inner purposiveness. In other words, life is a capacity of a thing to move itself in accordance with *inner* as opposed to *outer* principles.

[93] Kant's rejection of hylozoism on the grounds that it contradicts the very definition of matter can be traced back to the pre-Critical period. In *Dreams of a Spirit-Seer* (1766) Kant writes, "Hylozoism imputes life to everything;

Now, there is a potential *second* way of interpreting hylozoism and Kant's critique of the view.[94] According to this view, matter is endowed with life by a world-soul. This version of hylozoism is perhaps a call back to 17th century Cambridge Neo-Platonists such as Ralph Cudworth, hylozoism "makes all Body, as such, and therefore every smallest atom of it, to have *Life* Essentially belonging to it" (see *TIS*, Ch. 3, 1-2). Such hylozoists, says Cudworth, turn out to be atheists "carrying more then Semblance and Disguise of a Theist, than other Atheists" (*TIS* Ch. 3, pp. 106-7), because rather than claiming an intelligent God designed nature in accordance with purposes, they argue that some corporeal God-like force (a "*Numen*") is responsible for nature's purposive design.

I believe that this version of hylozoism falls prey to the same issue as the first version. He asserts that a hylozoism that endows matter with life in a manner reminiscent of the Cudworthian hylozoist produces a "circle in explanation" (*CPJ* 5:394). Though Kant is not entirely clear about what this circle is, I contend that we can piece it together by attending to Kant's critique of the first version of hylozoism. According to this second kind of Cudworth-style hylozoist, whatever endows matter with life (i.e., the *Numen*) is itself a corporeal thing. The act of endowment would seem to be an instance of mechanistic causality—a change in the state of a material thing

materialism, carefully considered, kills everything" (*Dreams* 2:330), echoing the first version of hylozoism mapped out above. If life is characterized as a capacity of a substance to bring about change internally, hylozoism's main vice is that it attributes such a principle to a thing that can only change by means of external causes. In other words, the hylozoist takes matter itself to be alive when it cannot be anything other than dead, or incapable of inner principle driven activity. (This is precisely why the thesis of materialism – or the thesis that everything is merely matter – "kills everything".) By saying that all matter is alive, the hylozoist therefore applies life to that which cannot be alive.

The hylozoist's transgression can also be gleaned from remarks in the *Inaugural Dissertation*: "Nothing material at all comes into being or passes away, and all the changes which take place in the world concern its form alone" (*ID* 2:418). Matter cannot contain a principle of change "because, if you concede that matter itself is in flux and transitory, there would be nothing left at all which was stable and enduring, which would further advance the explanation of phenomena in accordance with universal and constant laws, and which would, therefore, further the advance of the understanding" (*ID* 2:419). There is, in other words, a discontinuity between form as a source of change and matter, which can merely *be changed* from without. With this in mind, we can characterize the error of hylozoism as breaking this continuity and asserting a contradiction, for it maintains that matter both has an internal principle of change and cannot possibly have an internal principle of change.

[94] A special thanks to Sam Rickless for encouraging me to consider this option.

precipitated by some antecedent, spatially distinct state of another material thing. Thus, this second version of hylozoism is still defending the view that matter is capable of self-movement, contradicting the essence of matter. Whether it's mysteriously "in" matter or the endowment of a corporeal deity, both hylozoists commit the error of attributing to matter a property it could not possibly possess. Whichever route we take, "Hylozoism thus does not accomplish what it promises" (*CPJ* 5:395).

1.2. Kant's preferred explanation of nature's purposiveness

These critiques of dogmatic explanations of nature's purposiveness may leave us wondering what Kant's preferred explanation is. Although Kant rejects the possibility that we can *demonstrate* the unity characteristic of an organism to be the product of a soul using the body as its instrument or the soul acting as "artificer" of the body (*CPJ* 5:375-6), I want to suggest that Kant is open to a view according to which an organism is a certain compound of immaterial form and material body. Kant maintains that

> An organized being is thus not a mere machine, for that has only a motive power, while the organized being possesses in itself a formative power, and indeed one that it communicates to the matter, which does not have it (it organizes the latter): thus it has a self-propagating formative power, which cannot be explained through the capacity for movement alone (that is, mechanism). (*CPJ* 5:374)

In passages like these, Kant seems to be spelling out a conception of a natural product that is endowed with a power to act in accordance with inner principles, and therefore cannot be a *merely* material thing. In addition, that power is not reducible to matter, is not a property of matter "in itself." Rather, it is a power that "communicates" with matter and organizes it, and it is a power that "cannot be explained" by means of mechanism alone. Certainly, Kant will never hold that this power is something we can behold in outer sense and empirically cognize. Perhaps we can attribute such a power to the natural products we judge to be organisms on the basis of an assumption, an

hypothesis, or, as I want to argue, a belief.[95] Nonetheless, what seems clear is that hylozoism is a position that is conceptually distinct from the position articulated in the passages cited above. Hylozoism is a fundamentally contradictory view that takes life to be a property of matter "in itself." Ruling out the possibility that life is a property of matter "in itself" does not imply that it is impossible for a faculty or power of life to communicate with, interact with, or give a particular form or organization to matter.[96]

It is apparent that Kant is a critic of hylozoist theories of the organic, but that his rejection of hylozoism does not imply a rejection of the very possibility of organisms. For instance, in *Dreams of a Spirit-Seer*, Kant condemns the appeal to immaterial principles as the "resort of lazy philosophy", but quickly goes on to qualify that he is nonetheless "convinced that Stahl, who is disposed to explain animal processes in organic terms, was frequently closer to the truth" than his contemporaries who ignored "immaterial forces" and stuck to "mechanical causes" (*Dreams* 2:331).[97] Stahl maintains the possibility of organisms and attributes the life of the organism to an immaterial principle such as the soul, while Stahl's hylozoist contemporaries reduce the organism's principle of life to some material part of them (e.g., a particular gland, organ, etc.). Kant's predilection for Stahl's view is by no means a full-throated endorsement of it, and his attitude towards Stahl changes throughout the Critical period (see Pecere 2021, sections 2 and 3).

Even in the years following the publication of the *Third Critique*, Kant maintains a preference for views of the organism that associate its life with something other than a merely material principle. For instance, in his 1796 essay *On the Organ of the Soul*, Kant takes a strong stance against Samuel

[95] See chapters 5 and 6.

[96] Though we could never empirically cognize that life principle, I want to suggest that this relationship between life and matter is the most plausible model of the organism; believing in the organism is nothing other than believing in the possibility of this relationship between life and its material. I develop this reading in Chapter 5 directly above.

[97] For a more thorough discussion of Stahl's view and what it means that Kant endorses the view in this essay, see Section 1 of Pecere 2021.

Sömmering's hylozoist theory of "animated matter" which claims to have proven that the soul resides ventricular fluids on the basis of anatomical discoveries. Kant forcefully responds that to locate the soul in the material brain would be a "contradiction" (*Organ* 12:33). Any attempt to prove that "the principle of living force in animal bodies [and] the seat of the soul" is material constitutes "a malicious temptation for the metaphysician to dare a step beyond his limit in the field of physiology" (*Letters* 13:398). Instead, such living forces or the soul must be non-material, and though we can never empirically establish the reality of this non-material principle, we can still conceive of the soul as a "*virtual presence*, which belonged only for the understanding, and which just for that reason is not spatial" (*Organ* 12:31).[98]

Kant repeatedly and explicitly rejects hylozoism throughout his philosophical career. To him, it suffers from several vices. For one, it pretends to deliver empirical cognition of something that can never be empirically cognized – i.e., the purposiveness of nature. Second, it is an inherently contradictory position. Matter can only be moved by external causes and is lifeless; life is characterized by movement from internal causes; to attribute life to matter is assert a contradiction (i.e., mere matter both cannot and can be alive). Nevertheless, we see that a rejection of hylozoism *does not* entail a rejection of the very possibility that there are organisms in nature.

[98] In one of his final major publications, *The Metaphysics of Morals*, Kant admits, "Neither experience nor inferences of reason give us adequate grounds for deciding whether the human being has a soul . . . or whether life may not well be, instead, a property of matter" (*MM* 6:419). On the face of it, this might seem like a startling reversal. Has Kant fundamentally modified his conception of matter so that it is no longer by definition lifeless? When assessing the impact of this passage, we should attend closely to the first part of it: neither experience nor inferences of reason give us the grounds to determine whether life is a property of a "soul" or of matter. Neither theoretical reason nor empirical cognition can grant us access into the character (and possibility) of life. Kant is not a realist. Nevertheless, from the impotence of cognition and theoretical reason in this regard it does not follow that we must conclude life and organisms are a mere fiction. Drawing such a conclusion makes Kant out to be an idealist, for idealists such as Spinoza believe that ends are a mental projection formed on the basis of a prejudice and demonstrably a mere fiction (see the Appendix to *Ethics* I and the Preface to *Ethics* IV). Kant's rejection of hylozoism should serve as a reminder that our theoretical powers of cognition and reason cannot ever establish the reality of life and organisms, and the hylozoist's major misstep is that they erroneously overextend cognition and reason in this way. What the hylozoist's error does not entail is that organisms are a mere fiction or a conceptual impossibility. A rejection of hylozoism has certainly not ruled out a belief in the existence of the organism.

Kant sometimes conceives of the life of an organism as a not-merely-material principle that structures corresponding matter. Though we can neither empirically cognize nor empirically prove that this not-merely-empirical principle exists, we cannot prove its non-existence. Thus, we should not take Kant's rejection of hylozoism to be a wholesale rejection of the organism in general. With this in mind, let us now return to the question of whether Kant addresses Aristotle's teleology in the *Critique of the Teleological Power of Judgment*.

2. Aristotle on the purposiveness of nature

2.1. Aristotle's critiques of dogmatic explanations of nature's purposiveness

There are several reasons for thinking that arguments offered in sections 72 and 73 do not target Aristotle at all. For one, Kant never explicitly mentions Aristotle (or Aristotelianism) in the body of the *Critique of the Power of Judgment*. While Democritus, Epicurus, Spinoza, and many other philosophers are referenced in the body of the text, Aristotle is conspicuously absent. Given the absence of Aristotle, we may be inclined to think that his teleology – despite its influence – is not in Kant's sights at all. Two, a broad overview of Aristotle's thought on the purposiveness of nature reveals that Aristotle himself rejected all the same explanations of nature's purposiveness that Kant rejected.

Aristotle rejects what Kant would call Epicurean idealism, or the doctrine of "accidentality", on several fronts. Kant associates the Epicurean (or Democritean) philosophies with the proclamation that "accidentality" or "blind chance" is the ultimate source of the world's purposive organization.[99] Aristotle forcefully dismantles such a position:

[99] Kant is not only opposed to this doctrine of blind chance in his philosophy of nature, but also in his philosophy of history. He criticizes an Epicurean doctrine of history that makes it out to be a mere product of blind chance in his 1784 *Idea for a universal history with a cosmopolitan aim.* Kant also maintains that the presence of "variety" in the

> There are others who make the spontaneous the cause of the heavens and the cosmic systems. For they say that spontaneously the vortex come to be and the motion which separated out and established everything in the present order. And this is itself really incredible. For they also say that the animals and the plants neither come to be nor exist by luck, but rather nature or intelligence or something like that is their cause. For it is not just as luck has it that each of these comes to be out of a seed, but out of this one an olive and out of that one a human. But the heaven and the most divine things that we see they say to have come about spontaneously, without the sort of cause of the animals and the plants. Indeed, if things are this say, this would itself be worth knowing, and it would have been good to say something about it. In other respects what they say is absurd, yet it is even more absurd to say these things when nothing we observe in the heavens comes about spontaneously, and many things that do not come about by luck, they say incidentally do come about by luck. Indeed the opposite of this should be the case. (*Physics* ii 4, 196a24–b5)

Spontaneous, blind causes cannot make sense of the regularities exhibited in the world, to Aristotle. If we had any indication that this *were* the case, however, asserting a spontaneous, blind cause would be an incentive for probing deeper, not an ultimate explanation. So it is not only absurd to say that plants, animals, and the things we observe in the heavens come about accidentally, by means of blind chance – it is also absurd to stop inquiring once one has asserted blind chance as the principle of some phenomenon.

One could add that perhaps Kant not only has the attribution of blind chance as a principle to this idealist position, but that his invocation of Epicurus and Democritus serves to indicate that this idealist position invokes atoms as the ultimate source of the world's organization. Aristotle plainly rejects Democritean atomism (as well as any physical atomism in general) when he argues that the function of a thing cannot be accounted for merely by referring to configurations of shapes and the differences between them; two things can have the same shape (an eye of a dead person and the eye of a living person) while one is functional and the other is not:

> Does, then, configuration and color constitute the essence of the various animals and of their several parts? For if so, what Democritus says will be strictly correct. For such appears to have been his notion. At any rate he says that it is evident to everyone what form it is

human species "cannot be the work of chance" in *On the use of teleological principles in philosophy* (*OTP* 8:166), indicating that he would disapprove of the Epicurean approach in human sciences as well.

> that makes the man, seeing that he is recognizable by his shape and color. And yet a dead body has exactly the same configuration as a living one; but for all that is not a man. So also no hand of bronze or wood, or constituted in any but the appropriate way, can possibly be a hand in more than name. For like a physician in a painting, or a flute in a sculpture, in spite of its name it will be unable to do the function that its name implies. Precisely in the same way no part of a dead body, such I mean as its eye or its hand, is really an eye or a hand. To say, then, that shape and color constitute the animal is an inadequate statement, and is much the same as if a woodcarver were to insist that the hand he had cut out was really a hand. (*Parts of Animals* i 1, 640B29–1A6)

Atomists argue that the form or the arrangement of nature is a product of its atomic structure. However, Aristotle argues that two things can have "exactly the same configuration" and have the exact same "shape and color" without performing the same functions or being organized in the same way. A dead body has the same atomic structure or configuration as a living one, but the living body is capable of functioning in the way a dead body can. By reducing nature to its most basic atomic structures, the atomist does not explain the apparent teleological organization of nature, but only leaves the question of why nature is structured this way and not some other way open.

Kant labels another camp of idealists "fatalists". Fatalists, like Spinoza, argue that the world, as a system of ends, is ultimately grounded in a supreme, but necessary and unintelligent, world-cause: "on this system the connection of ends in the world must be assumed to be unintentional" and necessary (*CPJ* 5:391-2). Aristotle not only refutes this sort of idealism, but attributes it to Democritus. By making mere necessity out to be the ultimate cause of nature and demoting teleological explanations, Democritus inverts the proper relationship between necessity and teleology:

> It is clear that necessity in natural things is that which we call the matter and the motion for these things. And both explanations must be given, but more the cause for the sake of something. For this is the cause of the matter, but the matter is not the cause of the end, and the principle comes from the definition and the account, just as in products of art. Since a house is this kind of thing, these other things must come to be and constitute it, out of

> necessity. And since health is this, these other things must come to be and constitute it, out of necessity. And similarly with a human: if this, then that. (*Physics* ii 9, 200a30–b4)

Here, Aristotle maintains that the necessity of natural things, associated with the "matter and the motion for these things" must be accounted for. Nevertheless, this sort of explanation has no priority over a teleological one: "For this ["the cause for the sake of something"] is the cause of the matter, but the matter is not the cause of the end". Any explanation that accounts for the matter and the motion of things will be a part of an important part of a teleological explanation, but a teleological explanation is never reducible to an explanation that invokes necessity. Thus, Aristotle's thought is fundamentally at odds with a fatalist system.

Now let us consider whether Aristotle is a "realist." One kind of realist – the "theist" – asserts that nature is purposive on the grounds that nature was produced by an original intelligent being. In the first book of his *Metaphysics*, Aristotle praises Anaxagoras for stating that intelligence [*noûs*] is the cause of the cosmos and its order (see *Metaphysics* i 3, 984B11-22). However, Anaxogras uses this principle as a crutch more so than a genuine explanatory tool: "Anaxagoras uses intelligence as a *deus ex machina* for the making of the world, and when he is at a loss to tell for what cause something necessarily is, then he drags intelligence in, but in all other cases he ascribes events to anything rather than to intelligence" (*Metaphysics* i 4, 985a18–21). The theist generally fails, on Aristotle's account, because they do not provide a genuine explanation of the purposiveness of nature. The "intelligence" of an original being only tuns out to be a label attached to phenomena that cannot be explained by other sorts of causes (Johnson 2006, 113; and Johnson 2006, Section 4.4). Clearly, Aristotle himself is not going to rely on positing the existence of such a being to explain the purposive organization of nature and natural products.[100]

[100] For a discussion of why Aristotle sometimes invokes a concept of God in his discussion of teleology *without* resorting to the position described as theism, see Wieland 1975, 157-8. Wieland forcefully denies Zeller's (1883) contention that Aristotle had a natural theological conception of teleology.

By process of elimination, we might reason that Aristotle is a hylozoist and that Kant's critique of hylozoism amounts to a rejection of Aristotelian teleology. In the next section, I argue that, no matter what reading of Aristotle we adopt, it makes little sense to attribute what Kant called "hylozoism" to Aristotle. Some claim that Aristotle is a "realist" about teleology, others that Aristotle is an "anti-realist." Neither reading of Aristotle warrants the conclusion that he endorses either the view that all matter is alive or the view that life is a property of matter in itself.

2.2.Aristotle's preferred explanation of nature's purposiveness

There are two prominent ways of interpreting Aristotle's teleology. Some readers opt for an "anti-realist" reading of Aristotle's teleology, which makes teleology out to be a stance or a perspective we adopt in our investigations of nature, but that stance or perspective merely allows us to consider the world *as if* it were organized in accordance with ends. In contrast, "realist" interpretations argue that, for Aristotle, nature really is organized in accordance with final causes. Moreover, to the realist, final causes are more basic than and condition material and efficient causes. That is, we posit material and efficient causes as hypothetically necessary means of explaining the teleological essence of nature. Neither reading makes Aristotle out to be a proponent of the view that life is a property of mere matter, and therefore it makes little sense to attribute a hylozoist conception of purposiveness to Aristotle. Furthermore, both readings helpfully illustrate that Aristotle is committed to a distinctly *hylomorphic* view of nature's purposiveness.

2.2.1. Aristotle as a "realist"

According to Monte R. Johnon's "realist" reading of Aristotle developed in *Aristotle on Teleology* (2006), "Aristotle offers us a way to think about ends and goods as natural phenomena, as objective causes out there in the world, and not merely as products of the human mind", though minds can be conscious of the goods or ends in nature (290). But what precisely does it mean for

an end or a good to be a "natural phenomenon" and "objective cause"? To illustrate this, it might be useful to turn to a few concrete examples of teleological explanation throughout Aristotle's *corpus*. Consider the case of a living thing. For Aristotle, a living thing is "natural", and its nature

> is spoken of in two ways: being on the one hand as matter, on the other as substance. And the latter as both the mover and the end. Thus the soul is this [substance, mover, and end] of the animal, either the whole soul, or some part of it. It follows from this that, for the person investigating nature, it would be more important to speak about the soul than about the matter, insofar as the matter is a nature more on account of this [the soul], than the other way around. (*Parts of Animals* i 1, 641a25–31)

Here, Aristotle distinguishes two senses of the "nature" of a living being. On the one hand, a living being is natural because it is an entity made up of material such as bones, flesh, organs, and so forth. On the other hand, it is a "substance" [*ousías*]. The substantial nature of a living being stipulates that it is a thing with a soul, and that the soul serves as the thing's source of motion and its end. In other words, a living thing is moved by and exists for the sake of its soul.

When investigating nature, a researcher ought to focus on the soul, for the soul has a sort of explanatory priority over mere matter. This priority is illustrated by Aristotle in the following way later in the *Parts of Animals*:

> Since every organ is for the sake of something, each of the parts of the body are for the sake of something, and since that for the sake of which they exist is some activity, it is clear that the whole body is constituted for the sake of some manifold activity. For the sawing does not come about for the benefit of the saw, but the saw for the sake of sawing, since the sawing is an activity. Therefore the body as well exists somehow for the sake of the soul, and the parts are for the sake of the functions towards which each of them naturally grows. (*Parts of Animals* i 5, 645B14-20)

In an explanation of a living thing, a specification of the functions, powers, and capacities of the thing precedes an understanding of the material composition of its body. For this reason, Aristotle characterizes the body and its parts as elements that exist for the sake of some activity; as Johnson puts it, "no animal has feet, but lacks the ability to walk, or has lungs but lacks the ability to breath

air" (2006, 173). In this same way, the ends of a living thing constitute its material composition. An organic body could not even exist if it did not have ends.

While Aristotle's insistence that ends are part of a living thing's nature might tempt us to conclude that Aristotle makes life a property of matter, we should keep in mind that teleological and material causes differ in kind. If we keep this in mind, we shall see that even a realist reading like Johnson's prohibits us from locating teleology in matter, as the hylozoist does. Rather, as Aristotle argues,

> Everything is defined with respect to its function: the function of each thing—what it is able to do—is what it truly is, for example an eye is really an eye, if it can see, while if a thing is not so able, then it is that only nominally, for example a dead man or a statue of a man [is only nominally a man]. Or consider a wooden saw, which is but a likeness of a saw. So it is even with flesh: the function of this is less clear than it is with the tongue. So again with fire, though its function is even less clear, naturally, than the function of flesh. (*Meteorology* iv 12, 390a10–16)

That is, everything, even mere matter like the elements earth, air, fire, and water, is defined in terms of its ends or functions. On this picture, it makes no sense to render any form of purposiveness a feature of the material composition of a thing. Rather, a thing's ends or functions reside in a distinct and deeper level of explanation than its material composition. A hylozoist takes the material to be explanatory bedrock and seeks to reduce purposiveness to some feature of a thing's material composition. For Aristotle, hylozoism is not even a conceptually tenable position to adopt, for the ends of a thing specify a distinctly non-material aspect of its "nature".[101]

All of this suggests that, if Kant reads Aristotle as a "realist", Kant simply has not addressed his view in sections 72 and 73 of the Dialectic. Unlike an "idealist", Aristotle does not seek to explain away teleology by reducing it to blind chance or necessity. Unlike a theist, Aristotle does

[101] As for the possibility that Aristotle endorses the view that all matter is alive, Chapter 5 "Teleology and Elements" of Johnson 2006 artfully explains that Aristotle very carefully distinguished between animate and inanimate bodies (see esp. sec. 5.1 and the discussion of the motion of the elements in sec. 5.3).

not think that a hyperphysical intelligent being is the source of nature's purposiveness. Finally, unlike a hylozoist, Aristotle does not think of purposiveness as a property of mere matter and does not assert that all matter is alive. Like the realist, Aristotle subscribes to the possibility that there is life in nature. But life is neither created by God nor a property of matter; instead, the purposiveness of an organism is associated with its soul, where its soul is a non-material, formal, final, and locomotive cause of the organism:

> And the soul is cause and starting point of the living thing. But these are said in many ways and the soul is a cause in the three senses [of cause] that we have distinguished. For the soul is cause of the animate bodies 'whence the motion', and 'that for the sake of which', and as substance. That it is [a cause] as substance is clear. For the substance is the cause of existence for everything. And animation is existence for animals, but the cause and starting point of this is the soul. Again, the thing in a complete state constitutes the account of what exists in potentiality. And it is apparent that the soul is cause as an end and for the sake of which. For, just as reason creates for the sake of something, in the same way so does nature, and this is its end. And the soul is by nature this kind of thing [i.e. an end] in living things. For all the natural bodies are instruments of the soul; just as the natural bodies of animals, so those of plants, since these things are for the sake of the soul. But 'that for the sake of which' is twofold, both the 'of which' and the 'for which'. (*De anima* ii 4, 415b7–21)

That the soul is a "substantial" cause of an organism, or the reason for its existence, should be obvious to us – without such a principle, an organism could not exist. That a soul is a final cause is apparent from the fact that its body exists for the sake of certain functions. The roots of a tree exist for the sake of nutrition, the stomach of an animal exists for the sake of digesting its food, the triceps of a body exist for sake of generating force when pushing, and so forth. Since souls are nothing other than the functions of a form-matter compound, a body has a particular shape and structure for the sake of performing the functions specified by its soul. Likewise, without a soul, a body would be incapable of certain kinds of movement. While a body could be driven by all sorts of external pushes and pulls, without its soul it could not act for the sake of a desire, for example. In sum, as Aristotle puts it in the *Generation of Animals*, "there is no face, nor flesh, not having a soul in it" (*Generation of Animals* ii 1, 734B22).

Seeing as Aristotle makes the life of an organism a function of its soul and does not reduce a thing's functions to a merely material state of the thing, we might read Aristotle as possessing a distinctly *hylomorphic* (or perhaps *teleomorphic*) conception of purposiveness. A thing's ends interact with its material composition, determining the development, structure, and shape of its physical body. Its ends are inscribed into its soul, and the soul of a living thing is part of its nature, in Aristotle's terms. A realist reading of Aristotle simply maintains that formal, final, and locomotive causes of a thing specify features of that thing's nature, and all of these features of a thing's nature are distinct from, and not reducible to, those features specified by a material explanation of the thing. Thus, the final causes organizing and animating the material body of an organism are not a property of that material body, though these causes are a feature of the organism's poly-causal nature.

2.2.2. Aristotle as an "anti-realist"

Of course, there is another way of understanding Aristotle's teleology. Besides reading Aristotle as committed to the position that ends and functions are built into a thing's nature, one can adopt an "anti-realist" reading of Aristotle. This is precisely the reading Wolfgang Wieland develops in his 1975 essay "The Problem of Teleology", in which he argues that for Aristotle teleology is a mere concept of reflection, or a type of "as-if" reasoning. Wieland reaches this conclusion by first reassessing the role of chance [*tuchê*] in Aristotle's science. Typically, commentators interpret Aristotle's teleology as the "universal and supreme principle of Aristotle's physics" (Wieland 1975, 142). The consensus treats chance as an obstacle to a comprehensive teleological account of the physical world and attempts to explain it away. Wieland responds that we should not explain chance away; rather, we ought to realize that chance is essential for understanding the natural world and that chance does not represent an obstacle to a teleological

explanation of nature. But explaining the deep compatibility between chance and teleology requires Wieland to propose a unique interpretation of Aristotle's teleology: "where we speak of chance, teleological structures are already presupposed. With chance, an apparent 'as if' teleology is involved; this is present if a goal is reached, although there was no intention to reach it as such" (Wieland 1975, 144). It is a matter of fact that there are chance events in nature. Additionally, the only way to explain these chance events is to treat final causes not as necessary states, but as states that merely could have occurred.[102]

What Wieland concludes is that Aristotle's doctrine of chance demonstrates that "teleology is a form of thinking which can be applied only to the individual connections between events within the world" and "*telos* is a *concept of* reflection" (1975, 146). By treating teleology in this way, Wieland is hoping to defend Aristotle from critics who argue that his treatment of nature lacks scientific rigor. Because teleological explanation is merely a "concept which *makes possible a more exact search for causes* simply by presenting itself as a *guideline* for the exploration of a particular" (1975, 152), Aristotle does not commit himself to a teleology that would spook the soberminded scientist. Furthermore, Wieland observes that for Aristotle "in interpreting nature one *must* in general employ teleological categories" (1975, 146, emphasis added). However, this teleological account of nature that we are compelled to form is only one aspect of what should be a tetracausal explanation of nature: "the very fact that the final cause stands on the same level

[102] Because Aristotle accommodates chance in this way, one might be tempted to declare that an anti-realist reading makes Aristotle out to be an "idealist" who subscribes to accidentality as the universal principle of nature's purposive organization. Wieland helpfully sums up why, on his account, we should not take Aristotle to be such an idealist. Aristotle always frames chance events in teleological terms; idealists, in contrast, do not even consider the possibility that chance could be framed in this way:

> Thus because Anaxagoras, Empedocles, and the atomists (with whom Aristotle principally deals in this connection) were not familiar with the final cause, they were compelled to call chance to aid, since from their own presuppositions alone they were not able to account for the order in the world of appearances. But if a man speaks of chance (this is the outcome of *Phys.* II 4-6), he is implicitly thinking with teleological concepts. Consequently even those whose express view is that nature is nothing but a game of chance implicitly understand it in a teleological way. (Wieland 1975, 146)

conceptually as the other three causes makes it unlikely that it is the universal principle of nature from which everything can be derived" (1975, 147). Thus, teleology represents just one way of explaining nature among several other ways of explaining it. Teleology is not a self-sufficient universal cosmic principle, but one of several reflective standpoints that we must adopt if we want to explain nature.

Notice how similar this reading of Aristotle's teleology is to the conventional reading of Kant's teleology. For Kant, the teleological manner of investigating nature is a necessary but regulative maxim of the reflecting power of judgment. This means that we should never mistake it for a constitutive principle, which would reveal to us the actual, ontological constitution of nature. Nevertheless, while we should always seek to explain nature in mechanistic terms, there are proper occasions for us to judge nature teleologically (*CPJ* 5:387-8). Indeed, Kant sometimes speaks as if nature presents us with entities and scenes that are totally contingent from the standpoint of the understanding and its mechanistic manner of representing, and these situations plainly *require* us to deploy the teleological mode of judging nature (*CPJ* 5:404). Still, the teleological mode of judging represents just *one* mode of judging nature, and it subsists alongside the mechanistic mode of judging nature, as the two potentially share a common supersensible principle (*CPJ* 5:412). In short, the anti-realist reading of Aristotle reveals a number of parallels: Both Aristotle and Kant think of teleology as a way of *reflecting* upon nature, argue that we *must* deploy this form of reflection in certain contexts, and reason that this form of explanation coexists alongside other ways of explaining nature. In light of all these parallels, Wieland surmises that teleology had roughly the same value to Kant and Aristotle: "in his [Aristotle's] work teleology has no greater (and to be sure, no smaller) importance than it has in Kant's philosophy" (1975, 159).

On an anti-realist reading, Aristotle cannot even be enumerated among the dogmatic philosophers outlined in sections 72 and 73. Each of those philosophers make the mistake of taking themselves to have established the existence or non-existence of teleology on the basis of their reflections upon nature. However, on Wieland's reading, Aristotle maintains that teleology is merely a principle of reflection, never a means of gaining insight into the real constitution of nature. In this sense, Wieland's reading makes Aristotle's teleology a precursor to Kant's position, opening up the possibility that Kant's *Critique of the Teleological Power of Judgment* represents a revival of Aristotelian teleology. What Kant means to show us, by not ever mentioning Aristotle, is that Aristotle was not a dogmatic teleologist at all. Instead, Aristotle is a role model for our critically circumscribed teleological reflections upon nature. Moreover, just as the realist reading showed us that Aristotelian teleology is not hylozoist but hylomorphic. Final causality represents a different kind or aspect of causality than material causality, and the one is not reducible to the other. Rather, the principle of life in an organism can be understood as (at least) a formal and final cause that organizes a particular kind of material body.

3. Did Kant care about Aristotle's explanation of nature's purposiveness?

Above, we have seen that Kant defines hylozoism primarily as the thesis that life is a property of matter. Given his general definitions of life and matter, hylozoism is an inherently contradictory position and can never serve as an adequate starting point for a research program. In his survey of the various dogmatic explanations of purposiveness in nature, Kant places hylozoists within the camp of the "realists", who speciously assert that teleology is real on the grounds that they can discover "the life of matter", or a faculty of life somehow built into a material body. Since Aristotle is neither an Epicurean, nor a Spinozist, nor a theist, this might lead us to conclude that he is a hylozoist and that Kant's critique of hylozoism is a rejection of Aristotelian teleology.

However, on both "realist" and "anti-realist" readings of Aristotelian teleology, we find that Aristotle is not a hylozoist. Rather, Aristotle has a sophisticated *hylomorphic*, or perhaps better yet *teleomorphic*, view of life. Life is a not-merely-material, but instead formal and final cause that organizes matter in a certain way. If this concept of life is taken to be a real feature of nature and organisms, Kant does not enumerate this view in his discussion of the systems of teleology. If this conception of life corresponds to a mode of reflection we should adopt when explaining certain natural products, Kant seems to be sympathetic to Aristotelian teleology.

Nonetheless, this apparent sympathy should be puzzling in light of the fact that Kant never explicitly addresses the Aristotelian position on teleology. Perhaps it is the case that Kant simply did not read or care to discuss Aristotle. (After all, what evidence do we have that Kant actually read Aristotle?) Skepticism that Kant genuinely engaged with Aristotle should be warranted by the fact that, in his flagship text on teleology, Kant does not even mention Aristotle (or Aristotelian teleology). It may further concern us that, when Kant mentions Aristotle by name, he seems to present only caricatures of his philosophy without providing any textual evidence to back his interpretations. Assuming Kant did have some passing familiarity with Aristotle's teleology, we have seen that it is possible he could have adopted a realist or an anti-realist reading of Aristotle's teleology. Either Kant read Aristotle as a realist, which means that Kant ignored the view in his supposedly exhaustive taxonomy of the dogmatic systems of teleology, or he read Aristotle as an anti-realist, which means that Kant's position in the Critique of the Teleological Power of Judgment represents a revival of Aristotelian teleology. In other words, either Kant did not care to address the most influential theory of teleology in the history of Western philosophy at all or Kant did not care to spell out how he inherited the fruits of this position in his major work on teleology.

But there is a happier note we can conclude on. Elsewhere, I argue that we can (and ought to) read Kant as adopting a *non-mechanistic* understanding of nature. While most Kant interpreters argue that Kant either urges us to believe that organisms cannot exist in nature or gives us a method for definitively proving that there cannot be organisms in nature, elsewhere I have shown that Kant actually pushes us to commit to the existence of organisms in nature.[103] According to my reading, it is possible and advisable to form a belief in the existence of organisms in nature. This belief is rational – that is, it is not a commitment to a convenient fiction or to an inherent absurdity, but a commitment to an entity or structure that could possibly exist. This belief has important theoretical and moral implications – without it, our theoretical pursuits screech to a premature halt, and, with respect to his moral philosophy, Kant is unable to explain how humans can act freely and pursue the highest good in nature. This belief effectively makes it possible for us to avoid pronouncing nature a dead machine.

If we read Kant as a non-mechanistic, who urges us to form this sophisticated, firm, and positive relationship towards the existence of teleological structures such as organisms in nature, we can locate him somewhere in between the brute realist and the skeptical anti-realist. More importantly, on this reading, it seems as though Kant is deploying the tools of his transcendental philosophy to restore the Aristotelian picture of nature. Like Aristotle, Kant postulates that there must be teleologically organized beings in the natural world; unlike Aristotle, Kant specifies that this postulation is a belief. Organisms are neither a brute fact nor a convenient fiction, but an article of rational belief. We must presuppose that they exist in nature if we hope to complete our theoretical investigations of nature and bring about our highest moral ends. By subscribing to this

[103] See Chapter 6, sections 3-5 directly above.

middle position, it appears as though Kant has run Aristotelian teleology through his transcendental architectonic, leaving us with a critically qualified means of affirming that there is life in nature.

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