THE SOUL OF THE WORLD: PANPSYCHISM AND ITS RELEVANCE FOR CONTEMPORARY PHILOSOPHY

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Abstract

Panpsychism -- the composite of *pan*, which means "all," and *psyche*, the Latinized form of the Greek *psuchē*, or "soul" -- is the thesis that consciousness is a fundamental and ubiquitous feature of the universe. Although sometimes met with an incredulous stare, panpsychism is a metaphysical position which enjoys a long, venerable history that hearkens back to at least the Presocratic philosophers, but which eventually fell into relative obscurity with the rise of logical positivism in the 19th century. However, panpsychism is now once again gaining prominence in the contemporary philosophy of mind in response to the perceived logical and metaphysical insufficiencies of materialism, referred to as "physicalism" in contemporary literature, and dualism.

Physicalism suffers chiefly from intelligibility problems, by virtue of how it relies on unintelligible explanations of consciousness, such as brute emergence into the realm of the physical. Conversely, dualism is threatened mainly by an empirical problem, namely with respect to how it fails to adequately integrate phenomenal consciousness into the scientific description of the world, which constitutes the famous "mind-body problem." Accordingly, panpsychism promises to overcome both sets of problems, first by positing consciousness as intrinsic to physical reality, and second, by suggesting that such intrinsic mental properties metaphysically ground or necessitate physical structure itself. As such, mental properties necessarily belong not only to composite entities such as human beings and other animals but, more controversially, also to the fundamental building blocks of reality.

This does not, however, mean that panpsychism is immune to its own conceptual stumbling blocks, the most salient of which is known as the combination problem. The combination problem states that, given that organismal consciousness, or the kind of complex conscious experience that we have, is made up of an aggregate of smaller "microexperiences," it is difficult to make sense of just how such microexperiences can collectively constitute unified "macroexperience." Although the combination problem threatens to undermine panpsychism, there are many proposed solutions and, if such solutions succeed, panpsychism seems to represent a more parsimonious conception of reality than either of its traditional alternatives, so it is important to take it seriously.

This master's thesis intends to provide a comprehensive account of contemporary panpsychism as it exists today, in turn exploring the various solutions to the combination problem and other conceptual barriers and ultimately arguing for the legitimacy -- if not the preferability -- of a panpsychist metaphysics. While similar projects have already been done, my thesis will be novel in that it will provide both a contribution from Continental philosophy (which is normally neglected in the extant literature), and describe how panpsychism is practically useful for other philosophically relevant issues, especially regarding the ecological crisis.

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Introduction

What is Panpsychism?

Panpsychism, which is the composite of *pan*, which means "all," and the Latinized *psyche*, derived from the Greek word for "soul," *psuchē*, is a metaphysical position that is at least as old as Western philosophy itself (Brüntrup and Jaskolla, 2017, 1). Broadly speaking, it is the view that consciousness is a fundamental and ubiquitous feature of the universe, meaning that consciousness, namely in the form of phenomenal properties, belongs to all fundamental physical things, such as quarks and electrons. As such, it is differentiated from a number of other metaphysical theses, namely absolute idealism, materialism, and substance dualism, which constitute the three traditional alternatives to panpsychism. Absolute idealism, which I will simply call "idealism," is the view that the world consists exclusively of mental objects, their activity, or a combination of the two. Materialism, which I will call "physicalism," is the view that the world consists solely of physical objects and their relations, both of which are devoid of any kind of mentality. Finally, substance dualism, which I will simply call "dualism," because it is the primary type of dualism, is the view that the world consists of two fundamentally distinct substances: the mental and the physical. In contrast to these three traditionally held views, which are very much in vogue today in both the philosophical and scientific literature -- by different degrees -- panpsychism holds that mentality is situated within the structure of physical reality itself, and serves as that structure's intrinsic or categorical nature. It is, therefore, a species of

ontological monism[1], for it argues that the manner in which physical structure is realized is unintelligible without some kind of intrinsic element that can instantiate it.

Some discussion regarding the terminology is warranted. For the purposes of this thesis, the terms "consciousness," "mentality," "experientiality," and "phenomenality" will be used interchangeably. This is not terminological gymnastics, as one may suppose, because panpsychism generally speaking understands phenomenal consciousness as the first-person perspective of an experiencing subject. For consciousness to be present in a given subject, there must be something *that it is like* to be that subject, otherwise there would be no qualitative experience to distinguish the entity in question from a purely physical, mindless object. Consequently, panpsychism posits that not only complex beings with highly developed subjective experience have conscious attributes, but indeed all fundamental physical entities, the basic building blocks of reality, down to the subatomic level. This does not entail, however, that *all* physical things -- like tables and rocks -- must have conscious experiences, or that fundamental physical entities -- such as atoms and subatomic particles -- must have experiences that are qualitatively equivalent to those inherent to our own experience. Rather, panpsychism merely assumes that some kind of experientiality, whether unimaginably simple or highly developed, is necessary to the way in which the physical structure of the universe is arranged.

[1] It may be argued that panpsychism, instead of a kind of ontological monism, is in fact a kind of *nondualism*. Monism suggests that the mental, i.e., consciousness, is the underlying basis of all reality, including the physical. By contrast, if characterized as a nondual ontology, both the physical and mental domains would mutually necessitate each other, with neither aspect having metaphysical or logical priority. My own belief is that either of these perspectives describe panpsychism well without creating any problematic metaphysical commitments, but because my intention here is not to argue for one or the other, I leave it to the reader to interpret panpsychism either as a monism or as a nondualism. In the vast majority of the extant literature, panpsychism is interpreted as a monism, so for the sake of brevity I choose to do so as well. What it cannot be, if panpsychism is to be preferable to the normally accepted physicalist worldview, is a *standard* form of dualism which, as we will see, encounters its own set of complications. I mention *standard dualism* in particular because panpsychism may also be defined as its own species of dualism: see footnote two and David Chalmers' description of type-D dualism below.

Of the above alternatives, physicalism represents the most commonly accepted ontology in contemporary philosophy of mind and the natural sciences. As stated above, physicalism takes a reductive approach to consciousness, either by denying the causal relevance of conscious experience or by discrediting the notion of consciousness altogether. However, the reductive perspective of physicalism can only describe the relational or dispositional nature of the world, hence remaining silent on the intrinsic nature of the structure it so elegantly describes, as Bertrand Russell rightly points out in *The Analysis of Matter* (1927):

> Physics, in itself, is exceedingly abstract, and reveals only certain mathematical characteristics of the material with which it deals. It does not tell us anything as to the intrinsic character of this material. (1927, 10)

Panpsychism scholarship in the 21st century largely owes its renascence to this exact sentiment in Russell's thought, which went mostly unacknowledged by the philosophical community until very recently, within the past few decades. The metaphysics of physicalism is particularly problematic with respect to this notion, as it naturally leads to the view that, if consciousness genuinely exists, then it must come into existence by some inexplicable means, for instance, by brute emergence into the realm of the physical. For contemporary panpsychists, this view is completely unintelligible, because it supposes that phenomenal consciousness as we experience it must arise from utterly non-conscious ingredients, which does not make sense, and hardly presents a unified picture of reality. By contrast, dualism does no better than physicalism because it does not seem to account for the manner in which the two substances it presupposes -- the mental and the physical -- can reasonably interact with one another. As such, panpsychism offers a convenient "middle path" between physicalism and dualism, while preserving what is attractive

about either position, namely, the broadly-conceived naturalist framework of physicalism, and the authentic existence of mental being held in dualism.

In addition to Russell's insight into physical descriptions of the world, panpsychism is motivated by two overarching ideas: first, the genetic argument, which states that, given the complexity of phenomenal consciousness for physical organisms, there must also exist simple forms of conscious experience at the fundamental physical level. In other words, if these physical "ultimates" collectively constitute more qualitatively sophisticated physical entities, then they could not "give" such entities consciousness if they did not already possess it in some basic form already. Physicalism does not respect the genetic argument, as it denies the possibility that phenomenal consciousness or mentality exists at the fundamental physical level, often leading to the view that conscious experience is inexplicably emergent from purely physical elements. Second, the argument from intrinsic natures, which states that a particular instance of intrinsic or categorical nature is already known, in the case of human consciousness (3). These two notions are shared among virtually all panpsychist ontologies but, as we will see, are not specific to panpsychism. Indeed, there are other varieties of "Russellian monism," i.e., the view that physical entities must have intrinsic properties that are either presently unknown or completely unknowable, the most common of which is "neutral monism," which suggests that these intrinsic properties are neither mental nor physical, but "neutral," yet realize physical structure. However, panpsychists argue that non-panpsychist Russellian monisms are less favorable than panpsychism because they generally offer no positive conception of the intrinsic nature of physical things and do not sufficiently account for the emergence of higher-level experience from the arrangement of non-conscious physical ultimates (5-6). With this said, panpsychism broadly speaking responds to three primary opponents: physicalism, dualism, and

non-panpsychist Russellian monism, all of which have different variations, and all of which have arguably insurmountable philosophical or metaphysical complications that panpsychism either resolves or answers more parsimoniously.

While, *prima facie*, panpsychism presents a more unified portrait of reality than its counterparts, it is not immune to its own conceptual stumbling blocks, the most salient of which is known as the "combination problem." The combination problem states that, given that organismal consciousness, or the kind of complex conscious experience that we have, is made up of an aggregate of smaller "microexperiences," it is difficult to make sense of precisely how such microexperiences can collectively constitute unified "macroexperience." Historically, the combination problem originates from William James' 1890 *Principles of Psychology*, but has been formatted contemporarily in three main forms: the subject combination problem, the quality combination problem, and the structural combination problem, each of which corresponds with the "three characteristics of phenomenal states" (Brüntrup and Jaskolla, 2017, 10). These three aspects of the combination problem seriously threaten to undermine panpsychism because they bring into sharp relief the complications inherent to the notion that fundamental physical entities can intelligibly combine to produce conscious states. While far from the only argument against panpsychism, the combination problem is in most cases taken to be the most serious. Fortunately, not all panpsychist ontologies are threatened by the combination problem, and there are many proposed solutions, but it should be noted that the combination problem cannot be overlooked if panpsychism is to remain viable.

Although there has been a large degree of scholarship with respect to panpsychism in contemporary philosophy of mind in recent years, it is still very much in its infancy. In fact, much of the literature that will be utilized for this thesis has been written since 2009, and two of

the omnibus volumes referenced were produced in 2017 and 2019, respectively. While this offers an unprecedented degree of latitude as far as developing ideas is concerned, the reader should not expect that the many questions that she is expected to have will all be adequately addressed within the pages of this thesis, or in the broader literature itself. However, my hope is that the presentation of current research in a primarily exegetical way will, at worst, convince the reader of the legitimacy (or, more specifically, the *plausibility*) of a panpsychist metaphysics or, at best, help pave the way for further scholarship in panpsychism. To this end, my working questions regarding the content of this thesis are: (1) What is the condition of contemporary research in panpsychism? And (2) How does panpsychism contribute, if at all, to solving problems in philosophy more broadly? Regarding this second question, my intention is to show that panpsychism, beyond its theoretical elegance, also presents a unique hermeneutical opportunity by which other philosophically relevant issues may be addressed, in particular, the imminent ecological crisis, whose pertinence has increased in conjunction with that of panpsychism in the philosophical community. As such, I will be integrating a perspective from the Continental tradition that is largely commensurate with the Analytic literature and that will provide reasonable applications of panpsychist thought to ecological concerns. This supplementary research will, I hope, radically differentiate my own research from other, perhaps more univocal research in panpsychism and consciousness studies. Given all of this, the objective of this thesis is to demonstrate the following: (1) that panpsychism offers a more parsimonious and elegant portrait of physical (and phenomenal) reality than its ontological counterparts, *and* (2) that panpsychism specifically affords a unique hermeneutical method which seems to necessarily lead to a more consummately ecological *Weltanschauung*.

It should be noted that contemporary panpsychism adopts a technical vocabulary that is important to recognize throughout the length of this thesis, particularly when it comes to precisely how experience is to be defined. As mentioned above, experience is merely the *what it is like-ness* of a given entity, or the phenomenal consciousness intrinsic to an entity. In addition, panpsychism most often attributes experience to entities at both the microphysical level and at the level of macroscopic organisms. As such, microexperience is the phenomenal character, or the qualitative dimension, of fundamental physical ultimates. This contrasts with the macroexperience of higher-level subjects such as ourselves, who have a more unified, sophisticated subjective experience whose existence panpsychism attempts to coherently explain. Furthermore, microsubjects are the subjects presupposed by the existence of microexperience, and macrosubjects are the subjects presupposed by the existence of macroexperience. Panpsychism recognizes the existence of subjectivity at both of these ontological spheres, because as Strawson has argued (2009), an experience must necessarily be had by a certain subject of that experience, and because such experience is the intrinsic or categorical nature of physical structure, there must also be subjects at the fundamental level of physical reality.[2]

This master's thesis, accordingly, will be presented in four sections. Section one will discuss the most prominent alternatives to panpsychism, physicalism and dualism, and address how both ontologies face unavoidable complications that panpsychism promises to resolve. The end of the chapter will also briefly address a third alternative to panpsychism, Russellian monism. Section two will defend the hermeneutical utility of panpsychism for redefining and

[2] More recently (2017), Strawson has argued the premise that "*Ansichsein ist Fürsichsein*," meaning that the being of the "in-itself" is equatable with the being of the "for-itself," or what it is like for an entity to experience its own existence. In other words, "being is mind" (80), and phenomenal properties are constitutive of a *process* or *activity*, in which case the quality of conscious experience in a general sense cannot be separated from the possession of phenomenal properties, as panpsychism suggests. For Strawson, we have good reason to believe that nothing non-experiential exists, and because all physical matter is *fungible*, i.e., it can be transformed into any other form of physical stuff, then we can therefore assert that all physical stuff can give rise to experientiality (97-98).

potentially solving other philosophically relevant issues, namely, the ecological crisis. Section three, constituting the majority of the thesis, will provide the three primary arguments in favor of panpsychism: the argument from the philosophy of mind, the argument from metaphysics and the philosophy of science, and the argument from causation. Finally, section four will address the two arguments which most seriously threaten to undermine panpsychism: the combination problem and dispositional essentialism.

1 The Problems of Physicalism and Dualism

For the purposes of this thesis, the term "physicalism" will approximate what Galen Strawson has named "physicSalism" (2009, 34), or what David Chalmers denotes as "narrow physicalism" (2017, 27), and what Daniel Stoljar has called "standard materialism" (2019, 2). This kind of 'narrow' physicalism, according to Strawson, is "the view – the faith – that the nature or essence of all concrete reality can in principle be fully captured in the terms of physics" (2009, 34). Additionally, Stoljar defines physicalism as the thesis that all fundamental properties are physical (i.e., non-mental and concrete) properties (2019, 2). The purpose of defining physicalism in precisely this manner is to characterize it in accordance with its standard usage in the philosophy of mind and the natural sciences. It also allows us to radically differentiate it from "real physicalism," (Strawson 2009, 33), which Chalmers defines as "broad physicalism" (2017, 27), and Stoljar refers to as "non-standard materialism" (2019, 3). In contrast to a narrowly conceived physicalism, "real" physicalism is the view that any concrete and determinate phenomenon in the universe is physical, and not limited to tangible objects and their properties. As Hedda Hassel Mørch has noted, this distinction is predicated on just how the physical is defined, "by pointing to a paradigmatic physical object and referring rigidly to whatever stuff it is fundamentally made of, whose nature might not be fully captured by physical science" (2014, 11). Consequently, even the basic notion of what is properly "physical" is undergirded by certain metaphysical presuppositions, hence it is important for any physical theory to be informed by an appropriate metaphysics. While the reductive physicalism of the natural sciences encounters a number of theoretical complications that prove problematic for panpsychism, real physicalism, broad

physicalism, and non-standard materialism[3] are actually perfectly compatible with a panpsychist metaphysics. With this said, for this thesis, I will be using "physicalism" in the first sense, because it represents the restrictive kind of physicalism that panpsychism refutes, and whose problems panpsychism promises to overcome.

If by "physicalism" one means the narrow physicalism of the natural sciences, as has been described here, then the "natural" world is often conflated with the "physical" world made accessible by physics. Therefore, physicalism has great difficulty incorporating consciousness into its worldview, as consciousness is normally understood by its phenomenal or experiential character, a quality which is not easily represented by physical descriptions. For consciousness to have a place in the world, then, it is necessary to redefine either how we conceive of consciousness, or how we conceive of the nature of reality, our metaphysics (Chalmers 2003, 1). While many attempts have been made to recharacterize consciousness, none have sufficiently integrated it with our current naturalistic framework, which has led to what is called the "hard problem of consciousness," which is the problem of subjective experience. This constitutes a major dilemma for physicalism because it presupposes that this subjective experience, the *what it is like*-ness of an entity, is strongly emergent from utterly non-conscious elements. For Strawson, emergence cannot be "brute": "If it really is true that Y is emergent from X then it must be the case that Y is in some sense wholly dependent on X and X alone, so that all features of Y trace intelligibly back to X (where 'intelligible' is a metaphysical rather than an epistemic notion)"

[3] Stoljar takes great pains to contrast non-standard materialism from panpsychism, which he defines as a non-standard form of *dualism* (2019, 6). However, as David Chalmers demonstrates (2003), it is possible to conceive of panpsychism as either a monism or a dualism, which he signifies as type-F monism and type-D dualism, respectively. Indeed, according to Chalmers, the primary difference between the monistic and dualistic variations is that type-D dualism preserves fundamental causation above the microphysical level (40). For Stoljar, "standard" materialism is the view that "all instantiated fundamental properties are physical properties," where physical properties are those which are explained by physical theories that we currently have (2). As such, Stoljar's characterization of non-standard materialism is roughly that of Chalmer's "broad physicalism," and therefore may reasonably be compatible with panpsychism.

(2009, 46). In order to avoid this dilemma, physicalism, as mentioned above, takes a reductive approach with respect to conscious experience, on which consciousness can be explained wholly in terms of physical properties or processes (Chalmers 2003, 3). This is not satisfactory for a "real" physicalist, as reductive solutions seem to deny the genuine existence of subjective experience as it exists for us, substituting in its place some kind of narrowly physical event or process which itself is not subjectively experienced.

However, in addition to the hard problem of consciousness, there have been three arguments made against physicalism in the philosophy of mind, each of which maintains that there is an explanatory gap that exists between the physical and phenomenal, which is otherwise known as the mind-body problem. The first is the explanatory argument, which states that physical descriptions of the universe are only capable of explaining the structure and function of physical entities, which by itself does not explain the existence of consciousness. The second is the knowledge argument, which states that, given all of the physical facts about the world, one would still not be in possession of all of the facts about consciousness. The third, which Chalmers suggests is the strongest argument against physicalism (2017a, 20), is the conceivability argument, according to which it is *conceivable* in theory that a properly unified entity that is structurally equivalent to a conscious being could exist, but lacks at least some of that being's conscious states. This hypothetical, physically identical entity is what Chalmers has called a "zombie," for it is possible in theory that such an entity could be devoid of any conscious states whatsoever, and hence function autonomously without any conscious experience of its existence. These three arguments, the "epistemic arguments," indicate that there is an epistemic disparity between the physical and the phenomenal that is not bridgeable in principle, which means that there is no epistemic entailment from physical truths to phenomenal truths

(Chalmers 2003, 8). In other words, no amount of knowledge about the physical structure of the world and its functions could reasonably account for the explanatory gap and the apparent undeniability of phenomenal consciousness. As such, the arguments infer that in addition to the epistemic gap there is also an ontological gap, i.e., an explanatory gap from conceivability that extends to metaphysical possibility, which effectively falsifies physicalism, because it denies the possibility that truths about consciousness could ever originate from truths about the purely physical mechanisms elaborated by modern physical science.

In response to these three criticisms, physicalism has divided itself into three different factions, each of which denies that the relevant ontological disparity exists between consciousness and physical reality: type-A, type-B, and type-C, following Chalmers (2003, 9). Type-A physicalism holds that there is no epistemic gap and no phenomenal truths in actuality, so there cannot be an ontological gap between the physical and the phenomenal. Usually associated with "functionalism," for it often fully reduces phenomenal states to corresponding physical functions, it may also be viewed as a form of eliminativism, the view that consciousness as we generally conceive of it does not positively exist. According to Chalmers, this move amounts to "[denying] the manifest" (2003, 11), the primacy of subjective experience, which provides the initial impetus for finding more suitable explanatory accounts of consciousness. To be a type-A physicalist, then, would be to assert that "phenomenal properties, or mental properties that are not exhausted by a functional or behavioral description, certainly seem to exist, but claim that this is an illusion" (Mørch 2014, 13). This position appears to avoid the problem of emergence simply because it claims that there is nothing that genuinely emerges, either brutely or weakly, from what physics tells us about the universe. However, although type-A physicalism adopts what Strawson calls the "NE principle," the notion that "physical

stuff is, in itself, in its fundamental nature, something wholly and utterly non-experiential" (2009, 41), it ultimately dismisses the physical phenomenon, i.e., subjective experience, that it needs in order to doubt its very existence.

Type-B physicalism accepts that there is a conceivability gap (the epistemic gap) from physical truths to phenomenal truths, but denies that it entails an ontological gap. The most commonly-accepted type-B position holds that conscious states are *identifiable* with certain physical or functional states, which is similar to the type-A functionalist perspective. Identities are analogical states that are said to alleviate the ontological disparity between physical structures and the phenomenal states that they produce, and so the two are conflated with one another. The epistemic gap remains by virtue of the qualitative difference between physical functions and the experiences that they instantiate, or the fact that physical and phenomenal states *seem* to be ontologically distinct, but indeed are equivalent in actuality. For example, although the concept of 'water' is different from that of the chemical compound dihydrogen monoxide (H_2O), they both actually refer to the same substance. However, in light of the conceivability argument, it does not prove particularly problematic to conceive of a physically identical universe that does not contain conscious experience, whereas it *does* for physical substances such as water or DNA molecules. Chalmers states that type-B physicalists would therefore need to assert that consciousness is epistemically primitive, i.e., "the identity is not deducible from the complete physical truth [about the world]" (2003, 15) to keep from collapsing into type-A physicalism, which holds that the complete physical truth is all that is necessary for explanatory purposes. What is problematic about this stance, however, is that "the only sort of place that one finds this sort of primitive principle is in the fundamental laws of physics" (15), in which case the identity thesis recognizes consciousness as a fundamental law of nature, like

panpsychism, but ontologically identifies it with physical or functional states, and would inevitably lead to a nonreductive (non-physicalist) framework, like dualism or Russellian monism. Type-B physicalists respond to this in a number of ways, but the most interesting to Chalmers is Kripke's, who instead of resorting to the identity thesis postulates that some truths, such as 'water is H_2O', are always true without *a priori* necessitation (16). But this position is also susceptible to the notion that, unlike phenomenal consciousness, *a posteriori* truths are fully deducible from the complete physical picture of the world.

Finally, type-C physicalism, like type-B physicalism, accepts that there is an obvious epistemic gap between physical structure and consciousness, but supposes that it will be filled by future discoveries in physics, neuroscience, or some other empirical theory. According to this perspective, zombies may be conceivable now, but eventually will not be, once such discoveries are made. As Chalmers proposes, type-C physicalism tends to degenerate into a different position, whether it is one of the aforementioned types of physicalism, type-D dualism, or type-F monism, and is therefore too volatile to be a distinct option (2003, 23). This is largely a consequence of what imminent empirical advances are likely to "prove" about the currently existing epistemic disparity. One such possibility is that it will be demonstrated that the gap in our knowledge is merely due to conceptual misunderstanding, in which case type-C physicalism will be indistinguishable from type-A physicalism. However, the moment consciousness is not conceived as a functional concept, it ceases to be fully captured by physical descriptions:

> So the only room left is to hold that consciousness is a broadly functional concept after all (accepting type-A materialism), hold that there is more in physics than structure and dynamics (accepting type-D dualism or type-F monism), or holding that the truth of materialism does not require an implication from physics to consciousness (accepting type-B materialism). So in the end, there is no separate space for the type-C materialist. (27)

As Mørch argues, “it could still be argued that the epistemic gap would remain as long as our understanding of what it means to be physical, however the notion is to be precisely explicated, does not undergo a complete revolution” (2014, 14). In other words, if what is “physical” is not substantially revised by some hypothetical scientific discovery, which is not necessarily anticipated by type-C physicalism, then the relevant epistemic gap would still remain, as it applies equally to all physical theories in the narrow, physicSal, standard sense as they are commonly accepted today. Moreover, if the discovery were to dramatically alter the definition of the “physical” in the broader sense that is compatible with panpsychism, then it would no longer be a strict physicalism.

Dualism, on the other hand, is the thesis that a) some fundamental properties are phenomenal properties, and b) all non-phenomenal fundamental properties are physical properties (Stoljar 2019, 3). In addition, dualism holds that the two categories it posits -- the mental and the physical -- are somehow causally related such that physical states can cause phenomenal states, and phenomenal states can cause physical states, and is otherwise known as “interactionism.” The most widely accepted form of dualism is what Chalmers calls “type-D dualism.” On this view, the microphysical is *not* causally closed, as it is for physicalism, and “phenomenal properties play a causal role in affecting the physical world” (Chalmers 2003, 29). Type-D dualism is also found in three different variations: substance dualism, property dualism, and emergent dualism. According to substance dualism, which owes its existence to Descartes, there are two ontologically distinct “substances” that causally interact with one another. Property dualism holds that there is only one fundamental (physical) substance, but which contains both physical and phenomenal properties. Finally, emergent dualism is the view that phenomenal properties are metaphysically primitive products of certain physical structures, i.e., phenomenal

properties are themselves novel, and produce novel causal effects on the physical world, neither of which are fully explained by the way in which the physical structure has arranged itself. This last kind of dualism, which preserves downward causation for specific kinds of phenomenal properties, is similar to the nonconstitutive panpsychism defended by Godehard Brüntrup (2017), which will be reintroduced later. Chalmers suggests that the most influential objection to type-D dualism is that it is incompatible with what modern physics says about the universe; however, as Chalmers also points out, certain physical theories, such as quantum mechanics, actually appear not only to support, but encourage an interactionist interpretation (2003, 30).

Type-E dualism, or epiphenomenalism, generally holds that the microphysical is causally closed, and maintains that although phenomenal states are ontologically separate from physical states, such phenomenal states have no causal relevance. That is to say, according to epiphenomenalism, conscious states do not effect downward causation on physical systems. Type-E dualism is closely related to the third kind of dualism, type-O dualism. While this view, like type-E dualism, generally accepts the causal closure of the microphysical and that the physical and the phenomenal are ontologically distinct, it nevertheless insists that instantiated phenomenal properties play a causal role in conjunction with physical properties, through what is called "overdetermination." Epiphenomenalism and overdetermination are both relatively coherent theories in Chalmer's view, but they are deeply counterintuitive, as they seem to deny the strong intuitive sense of agency and causal powers that we seem to have as unified subjects (2003, 35-36). Mørch agrees with this sentiment, and postulates that a refutation of epiphenomenalism and overdetermination would prove fatal to dualism: "the denial of epiphenomenalism and overdetermination together with acceptance of physical causal closure seem to entail that the mental is physical, which refutes dualism" (2014, 18).

Although, by this point, it should be relatively clear what some of the primary critiques of the individual varieties of physicalism and dualism are, it may not be apparent how these critiques all relate to one another, as thematic, overarching complications with both metaphysical positions. Mørch suggests that physicalism, broadly speaking, is subject to *intelligibility problems*, by which "physicalism is committed to the world in some way being fundamentally unintelligible" (2014, 17). For instance, general "emergentist" physicalism[4] hinges on the notion of the brute emergence of consciousness from a causally closed, narrowly physical microstructure. In the case of type-A physicalism, the problem is the denial of the first-person, experiential perspective of organismal (and, by extension, microphysical) consciousness. For type-B physicalism, it is the claim to metaphysically primitive identities (identities which are not fully deducible from the complete physical picture of the world) and strong *a posteriori* necessities, i.e., that, like the chemical compound 'H_2O', phenomenal consciousness is always true without *a priori* necessitation, as mentioned above. It is difficult to make sense of an ontology that must resort to these counterintuitive explanations for the emergence of consciousness, and because these explanations are all that physicalism seems to offer, we are still left with an unresolved, perceivably intractable explanatory gap.

By contrast, dualism generally suffers from an *empirical* problem, which is a problem of "fitting the mental into the scientific picture of the world, especially as regards its causal structure, while at the same time preserving theoretical virtues such as elegance and parsimony" (Mørch 2014, 17). Such complications follow from the overwhelmingly accepted premise that the physical structure of the universe, and specifically its *microphysical* structure, is causally

[4] It should be noted that there are two types of expressly "emergentist" positions: one physicalist, and one dualist, the former of which was only mentioned in passing. The reason for this is because these two positions essentially represent different interpretations of the same fundamental worldview, which is that the physical and the phenomenal domains are ontologically distinct, but the phenomenal is necessitated by the physical in some manner or another. In this sense, "emergentism," which may be compatible with either physicalism or dualism, is subject to the same problems of intelligibility as the other forms of physicalism.

closed. If it is assumed that the microphysical is causally closed, then every phenomenon, which is always-already defined as narrowly physical, is linked to a sufficient physical cause. As a result, there is no intuitive way in which something purely experiential, like conscious experience, could correspond with the physical structure from which it is said to originate. This constitutes a special intelligibility problem for dualism, as the interaction between the two substances or properties it presupposes is ultimately unintelligible and, for this reason, the notion of emergence is also problematic. Physicalism, however, is also potentially undermined by its own empirical problem: the exclusion problem, which states that, given that all causation occurs at the fundamental physical level, the microphysical level, then it seems to causally preclude the macrophysical unities that they constitute. These last two problems, the intelligibility problem for dualism and the empirical problem for physicalism, are largely rejected by contemporary philosophers for a number of reasons (2014, 19). The other intelligibility and empirical problems, however, stand as serious conceptual stymies for the two perspectives and, while physicalism and dualism avoid each other's most significant complications -- physicalism by identifying the mental and the physical domains, and dualism by *not* identifying them -- panpsychism promises to avoid both, which makes it immediately preferable to either physicalism or dualism.

1.1 Russellian Monism

In addition to physicalism and dualism, there is a third general type of ontology that serves as an alternative to panpsychism. This view is known as Russellian monism, but as one may suspect, panpsychism itself is a kind of Russellian monism, so for the purposes of this thesis, I will use the term "Russellian monism" to denote a version of non-panpsychist Russellian monism. With

that said, Russellian monism is the thesis that consciousness is instantiated by categorical or intrinsic properties of physical entities. As noted previously, this position is named after Bertrand Russell who, in his 1927 *The Analysis of Matter*, called attention to the way in which physical science, for all of its utility, does not provide a description of what physical entities are innately, in their intrinsic nature. Such physical descriptions only show us the *dispositional* or *relational* character of physical things (i.e., what they *do*), but remain silent on their categorical natures (i.e., what they *are*, intrinsically). In most cases, the intrinsic nature of physical entities acts as a supervenience base that grounds physical dispositions and the way in which physical structure is arranged. Hence, while -- like physicalism -- Russellian monism does not assume a dichotomy between ontologically distinct substances or properties, the view holds that phenomenal properties must be logically and metaphysically antecedent to the physical structure that they realize.[5] By contrast, however, physicalism holds that physical structure is anterior to anything that could be interpreted in terms of consciousness or phenomenality, such as in epiphenomenalism. It should be noted, however, that for Russellian monism broadly speaking, causality is still determined at the microlevel, though it is transitively contingent on the existence of phenomenal properties, otherwise it would not differ from physicalism. Chalmers (2003) calls Russellian monism "type-F monism," and there are many different versions, both panpsychist and non-panpsychist.[6]

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[5] The primacy and metaphysical antecedence of the phenomenal is generally true of all forms of Russellian monism, but not necessarily for all types of panpsychism. However, it does appear that the most important varieties of panpsychism are Russellian in their outlook, and therefore support the claim that the phenomenal must precede physical structure, which is paramount for many of the arguments made in favor of panpsychism to follow.

[6] The four primary types of Russellian monism are: micropsychism, neutral monism, panprotopsychism, and what Mørch defines as "mysterianism" (2014, 21). To this list I add cosmopsychism, as it presents yet another alternative, and opposes micropsychism, which represents the stance toward panpsychism that is most prevalently accepted in contemporary philosophy. Micropsychism is the view according to which some, but not all, fundamental physical entities have phenomenal properties, of which panpsychism is a "radical" form of micropsychism. Cosmopsychism is the view that "phenomenality is prevalent because the whole cosmos instantiates phenomenal or protophenomenal properties. It says, moreover, that the consciousness of the cosmos is ontologically prior to the consciousness of ordinary individuals like us" (Nagasawa and Wager 2017, 113). Neutral monism is the view according to which there is a third, "neutral" classification of properties which are neither physical nor phenomenal. Panprotopsychism,

Although addressing each of these subclassifications is beyond the scope of this thesis, the reader should note that each of these, if interpreted in a non-panpsychist way, is generally rejected on the premise that panpsychism is less counterintuitive and affords a more positive conception of the categorical properties it presupposes, precisely because such properties are held to be strictly phenomenal rather than something else. For instance, neutral monism, the most popular of the options in the contemporary literature, claims that there is a third, "neutral" category of properties that bridges the ontological gap between the mental and the physical domains. Panpsychists do not accept this ontology, broadly speaking, on the grounds that panpsychism attempts to eliminate the need for neutral properties by suggesting that phenomenal properties themselves serve as the categorical realizers of physical structure. Because such neutral properties are not necessary for panpsychism, panpsychism is preferable to any ontology that enlists the help of such neutral properties which, as panpsychists gladly point out, encounter some of the same problems faced by physicalism and dualism, for instance, the brute emergence of phenomenal properties from nonphenomenal (neutral) properties. As such, it is up to the defenders of non-panpsychist varieties of Russellian monism to articulate a more concrete, determinate account of neutral properties and how they would instantiate the phenomenal properties that make up our experience. Until they can, however, panpsychism clearly seems to have considerably more explanatory power, and therefore represents a better alternative to the insufficiencies of physicalism and dualism.

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which is a form of neutral monism, is the thesis that fundamental physical entities are protoconscious, or have protophenomenal properties that are neither physical nor properly phenomenal, and hence "neutral." Finally, mysterianism holds that neutral properties are decidedly *unknowable*, and therefore not positively conceivable, yet would provide closure to the explanatory gap if they *were* known.

2 Panpsychism and the Ecological Crisis

Now that I have addressed the most prominent of the alternatives to contemporary panpsychism as they exist today in the academic literature, physicalism and dualism, it may still be unclear how a panpsychist metaphysics can help resolve certain concrete problems in philosophy more broadly, and not merely pertaining to issues that arise in the philosophy of mind or the philosophy of science. In other words, other than providing solutions to the extremely specific disciplinary problems present in the philosophy of mind and metaphysics, what exactly can adopting panpsychism as a *Weltanschauung* do for us in more practical terms? In addition to its considerable explanatory power which, as we will see, appears to overcome the obstacles that challenge physicalism and dualism, my contention is that panpsychism affords a unique hermeneutical opportunity by which we can interpret other philosophically relevant problems. Panpsychism is a "meta-theory," or a statement *about* theories without being a theory itself (Skrbina 2005, 2), which means that, given that panpsychism simply posits that mind is a fundamental and ubiquitous feature of the entire universe, any "theory" can be reconstellated in terms of what panpsychism presupposes about the world. We have already seen this in at least one form in this thesis; for instance, what is conceived as "physical" is entirely contingent on how our meta-theory defines what is physical according to its specific aims and reasoning. This is how we arrive at the dichotomy between broad and narrow physicalism which, in the case of panpsychism, makes all of the difference.

That panpsychism is a meta-theory in this sense, however, also permits it to provide an ontological framework for any other theory, in that very specific assumptions are "carried along" with the metaphysical perspective when attributed to a given theory. For this reason, and in light

of its seeming legitimacy and preferability in the face of its alternatives, one would do well to utilize panpsychism to philosophically interpret other issues that are not comprehensively examined or resolved by physicalism and dualism. One such issue is that of imminent ecological collapse, which has dramatically increased in importance in recent years in the philosophical community and elsewhere, as the issues it raises become more sharply defined and our time to address them significantly more limited. While the empirical sciences have assumed the predominant position as regards the ecological crisis, they by their very nature tend to presuppose a certain physicalist or dualist ontology which may in fact hinder their ability to actually speak about the crisis the most effectively. As such, perhaps panpsychism can help us both think and speak about the ecological crisis in a manner that is more conducive to effecting concrete climate action and, if the possibility is there, then it certainly worth exploring in more detail.

Before we introduce panpsychism's relationship to the ecological crisis, however, it is imperative that we first discuss the two most significant varieties of panpsychist ontologies, constitutive and nonconstitutive panpsychism. Godehard Brüntrup (2017) notes that constitutive panpsychism is the most widely accepted form of contemporary panpsychism. Constitutive panpsychism is the view according to which macroexperience, or the phenomenal experience of macrosubjects like human beings, is fully grounded in or realized by microexperience, or the phenomenal character of microsubjects (Brüntrup 2017, 49). On this view, Chalmers states, "macrophenomenal truths obtain in virtue of microphenomenal truths, in roughly the same sense in which materialists hold that macrophenomenal truths obtain in virtue of microphysical truths" (2017a, 25). Conceived within a broadly physical framework, this view claims that all macrophenomenal truths are entailed by microphenomenal truths, either partially or wholly, by

way of composition, grounding, or realization. That is to say, given a macrophenomenal truth, one may, at least in part, deduce its instantiation solely from the manner in which microphenomenal properties are arranged at the microphysical level. Hence, consciousness at the macrophysical level is neither brutely nor strongly emergent from the microphysical, but instead *weakly* emergent, which for Chalmers (2017a) constitutes a stronger argument, because there is something about the microphysical by virtue of which conscious experience can be intelligibly derived, namely the microphenomenal properties of these microphysical entities. Similarly to how there is both type-A and type-B physicalism, there is also type-A constitutive panpsychism, on which there is *a priori* entailment from microphenomenal to macrophenomenal truths, and type-B constitutive panpsychism, on which there is only *a posteriori* entailment. Chalmers defends a type-A version of what he terms Russellian constitutive panpsychism, according to which "quiddities," or fundamental categorical properties that play the physical roles described in physics, serve as grounds for macrophenomenal properties. On this view, quiddities are the phenomenal properties of microphysical entities that perform physical functions in addition to instantiating further phenomenal states.

Constitutive panpsychism contrasts with nonconstitutive panpsychism, which is otherwise known as "emergent panpsychism," as it accepts that macrophenomenal states are *strongly emergent* from microphenomenal states.[7] Brüntrup defines nonconstitutive panpsychism in such a way that explicitly opposes constitutive panpsychism:

[7] There are two important kinds of nonconstitutive panpsychism in the contemporary literature, the first of which is the phenomenal "infusion" view advocated by William Seager (2017), and modified by Mørch (2014), according to which microphenomenal states are dissolved and replaced by subsequent macrophenomenal states; the second is a "layered" ontology, defended by Brüntrup (2009, 2011), Gregg Rosenberg (2017), and Uwe Voigt (2018), on which microphenomenal and macrophenomenal states exist simultaneously at different levels. Both of these positions are significant, and offer invaluable arguments in favor of panpsychism that will be discussed later in the section on the arguments for panpsychism (chapter 3).

> Nonconstitutive panpsychism claims that unified macroexperience is an emergent phenomenon that cannot be fully captured by the metaphysical concepts of constitution, composition, grounding, or realization. (2017, 49)

According to this position, the phenomenal states of macroscopic life forms are considered fundamental in the same sense as the microphenomenal states for fundamental particles at the most basic level of reality. This is because the principle of constitution or grounding from the microphenomenal to the macrophenomenal presupposed by constitutive panpsychism, for the nonconstitutive panpsychist, does not sufficiently account for the causal powers native to higher forms of conscious experience. Constitutive panpsychism tends to support the notion of supervenient causation, by which macrophenomenal states are wholly contingent on or determined by microphenomenal states at a more fundamental level. Brüntrup finds this position deeply problematic, and instead proposes, like type-B physicalists, that macrophenomenal states are metaphysically primitive. However, unlike type-B physicalists, Brüntrup already accepts panpsychism, and thus also concedes that macrophenomenal states must exist among the basic facts about the natural world, along with microphysical entities and their microphenomenal states. As a result, higher-level, macrosubjective wholes, such as human beings, are conceived as *more than* the sum of their parts, or the microphysical and microphenomenal ingredients that are said to constitute them:

> What we wish to preserve and account for in any theory of natural causation is not an abstract metaphysics of the causal efficacy of mental properties. It is rather our strong common-sense intuition that agency requires the causal efficacy of a higher-level entity as such. Agency requires that my actions as a person are the result of me as a higher-level unity. If the microparticles that constitute me do all the causal work, then the sense of agency is lost. Constitution cannot account for the causal efficacy of the entities constituted at a higher level. (63)

Brüntrup argues that constitutive panpsychism "leave[s] the overall framework of traditional physicalism intact" (2017, 59) by preserving the sense of microdeterminism from the fundamental level to macroexperience. A common assumption for constitutive panpsychism is that fundamental particles, which have some rudimentary kind of experience themselves, combine in some way to collectively ground the macroexperience of higher-level individuals. However, because the relevant kind of grounding is a *constitutive* rather than a *causal* relation (Mørch 2014, 40), it is difficult to see how intrinsic phenomenal properties have any causal relevance, which would lead to either epiphenomenalism or overdetermination. As Brüntrup suggests, intrinsic (phenomenal) causality is important for panpsychism because, "in the case of panpsychism: if the cause had different intrinsic properties, then the effect would be different. Thus the intrinsic properties are causally efficacious after all" (2017, 60). If this were not the case, then constitutive panpsychism would be in danger of collapsing into one of the types of physicalism or dualism discussed in the preceding section, and would therefore inherit their complications.

Nonconstitutive panpsychism, on the other hand, respects the claim to causal efficacy by positing metaphysically primitive, and therefore fundamental, macrosubjects. In this sense, higher-level subjective unities have novel causal effects that influence the physical structure of the world, and which are different, i.e., over and above, the causal powers of microphysical ultimates. Consequently, the subjective dimension familiar to these macrosubjective beings is strongly emergent from the physical microstructure and microphenomenology. It is important to note, however, that strongly emergent phenomena are *not* brutely emergent in the sense Strawson describes, and which Brüntrup defines as "super-strong emergence" (2017, 68). Rather, the kind of strong emergence necessitated by nonconstitutive panpsychism is one in which intra-attribute

emergence is possible between microphenomenal and macrophenomenal truths, which is to say, strong emergence only implies that attributes that are formally possessed by a subjective whole's constituent parts are communicable between the microphenomenal and the macrophenomenal. Thus, intra-attribute emergence abides by the genetic argument for panpsychism in the way that brute, *inter*-attribute (super-strong) emergence does not, in that mentality is always already present in the physical microstructure. This is precisely the reason why nonconstitutive panpsychism is distinguished from another basic form of emergentism, which has both physicalist or dualist interpretations, as mentioned above. Nonconstitutive panpsychism does not require superstrong, inter-attribute emergence, and therefore does not posit the emergence of ontologically separate entities from those that do not already have phenomenal properties.

Where constitutive and nonconstitutive panpsychism seem to differ is primarily an issue of determinism or entailment, i.e., whether or not there is *a priori* entailment from microphenomenal truths to macrophenomenal truths, and if so, whether or not this determinism carries on through the causal structure at the macrophenomenal level. Emergent (nonconstitutive) panpsychists such as Brüntrup are motivated by our intuitive sense of causal efficacy as higher-level conscious unities, which is to say, our sense of agency and ability to make decisions by virtue of the unity of our subjective experience. If all higher-level causal relations are wholly predetermined by the microphysical base -- that is, if macrosubjects are causally supervenient on the microphenomenal level -- then the logic of constitution would entail that such higher-level subjective unities such as human beings are denied causal relevance (2017, 63). With this said, panpsychism, especially in its *nonconstitutive* form, can help us better understand the ecological crisis in our place within it.

If one was set the task of defining the ecological crisis philosophically, one would be hard pressed to find a suitable answer. One way of responding is postulating that the ecological crisis is some object or artifact that is both spatially and temporally distant from us as human actors. That is to say, the ecological crisis is typically understood as a hypothetical event or state of affairs that could potentially occur not only to human culture and society, but the entirety of the biosphere -- the whole of the ecological system -- if concrete, preventative action is not taken. But is this definition truly satisfactory? Does it accurately represent what, for so many climate activists and geological scientists, induces considerable anxiety and concern, and whose devastating effects can be empirically measured at the present moment? There does seem to be a not miniscule degree of collective consciousness surrounding the threat of climate collapse and its present effects, and with such awareness of the threats it poses, the human species has found itself occupying a position in which it itself is an ecological force capable of fundamentally and catastrophically altering climate systems on the planet. The term normally attributed to this phenomenon is the Anthropocene, which is considered the epoch in which the human species has "transcended" its place relative to all other entities in the natural world, with the unique ability to manipulate (for better or, more relevantly, for *worse*) organic systems directly in a way that no other species is physically capable. As such, it is said that we are "in" the Anthropocene, similarly to how we are currently "in" a situation that precedes ecological collapse if the appropriate measures are not taken to prevent the worst possible outcomes. But what, precisely, does it mean to be "in" the Anthropocene?

Uwe Voigt argues that there are actually three distinct ways in which we exist inside the Anthropocene, only one of which involves how we relate to the ecological crisis spatiotemporally, or rather, at the level of objectively accessible "facts" (2018, 1). According to

this first sense, which Voigt calls the "outer side" of the Anthropocene, to be "inside" the Anthropocene "means to be within a certain geological time, namely the geological time we are living in" (1). That is to say, this outer sense of relating to the Anthropocene is what we typically mean by existing within the time of the Anthropocene, as a determinate period of time in history. To this outer sense we attribute other "facts" about the Anthropocene, all of which are empirically measurable -- and therefore "objective" -- and able to be examined by an external observer: radical changes in ecosystems, loss of biodiversity, and severe weather events, just to name a few. Timothy Morton, Voigt adds, suggests that facts such as these are what are called "hyperobjects," which are objects which are distributed so massively across time and space so as to defy direct, unmediated representation (2). Such hyperobjects, i.e., what we can scientifically measure about our current geological period, therefore must be experienced through "representative instances" that impress upon us the authentic existence and magnitude of what they represent. In the case of the Anthropocene, while the loss of biodiversity that we have catalogued indicates that we are "in" an epoch characterized chiefly by the preternatural (and catastrophic) powers of the human species on the natural world, it nevertheless "withdraws" from our direct access even as it "pervade[s] our environment and our bodies" (2).

However, as Voigt rightly points out, this is but one way of understanding our relation to a moment on a timeline; we can also often speak of *what it is like* to exist 'in' the Anthropocene as well. In other words, in addition to the outer side, there is also an inner sense of inhabiting the Anthropocene as a subject who *experiences* being within a particular geological period with very specific qualities. As subjects, we know that we are in the Anthropocene not just because we have objectified it, and have measured it and its effects like we would the Jurassic period in geological science -- as a fact or datum, independent of time or space, to which we can only

relate analytically or reflectively. Instead, precisely *because* the Anthropocene is within time and space indicates that we must experience its effects internally, as phenomenal properties, insofar as we are aware of its influence over us and our behavior. Indeed, as Timothy Morton argues, "ecosystems" are not constituted merely by humans, animals, plants, and their natural environments. Rather, thoughts, wishes, fantasies, moods, and states of mind also belong to the complex, interrelated mesh that makes up an ecosystem (Morton 2016, 67). This would entail that mental states, made up of feelings and moods, for instance, contribute equally as much to biological life "in" the Anthropocene as the typically (or narrowly) "physical" entities which are dispositionally related in the causal nexus. Furthermore, "moods" are the very way in which organisms appear to "belong" to a biological whole, and hence meaningfully *relate* to other relata:

> Moods are certain states of a subject belonging to a comprehensive whole (in this case, a biotope): namely those states in which to be is like something for the subject. Here the biological benefit of moods reveals itself: Through them, the subject feels what it is like (in a given situation) to be a part of the comprehensive whole. This enables the subject to know how that whole is doing, what is going on around the subject, without requiring complex languages or the entertaining of propositions. This makes it plausible that we share this "moody" kind of knowledge with animals. (Voigt 2018, 4)

Consequently, given that moods are a dynamical component of this "comprehensive whole" constituted by a large number of subjects, there is an evident existential or ontological aspect to the Anthropocene that both informs and transcends the limited perspective of any one of its constituent parts. This would suggest, like the meta-theory of panpsychism, that moods, as concrete phenomenal properties belonging to certain actors within the biosphere, go beyond their individual representations to constitute the overall mental structure of the biological whole. As such, while there is something that it is like to be in the Anthropocene for each particular

individual, each always already belongs to a more comprehensive unity that is pervaded by the same anxiety and concern that manifests at the level of concrete particulars, or individual subjects. Moreover, in this sense one may not conveniently separate what is traditionally understood as the "subject" of the experience (i.e., either a singular macrosubject or an aggregate of macrosubjects within a given biotope) from the "object" (i.e., the Anthropocene itself). The Anthropocene does not simply exist as a stagnant, discrete object in this traditionally conceived way, but rather as a state of mind that permeates the lived experience of, and is shared between, the natural individuals which inhabit it. The relatedness between humans and nonhumans in this matrix is "arche-lithic," meaning that all actors, both human and nonhuman, are always already engaged in a primordial mode of relatedness to one another, just by virtue of their coexistence (Morton 2016, 63). But the interdependence between all natural entities becomes increasingly conspicuous the more causal efficacy is secured disproportionally by a single component of this network of relations, namely the human species. This is often expressed, according to Voigt, as a kind of vicious narcissism that engenders an "ecology of fear" that is adversely felt at many, if not all, levels of the ecosystem, and which perpetuates itself in the perpetrator by the experience of emptiness and isolation (5). Morton, on the other hand, suggests that narcissism is in reality a necessary consequence of coexistence; the degree of self-awareness made possible by narcissism actually mediates one's relation to the other (105). Hence the hyperobjects of the Anthropocene, for all of their apocalyptic portents, may actually serve to reorient how we tend to view ourselves in the relational matrix in which we are always reckoning with the "not-I," the "not-human."

Finally, in addition to the outer and inner sides of the Anthropocene, there is a third, "inmost" side, according to which to be "in" the Anthropocene is to exist alongside other entities on different, but related, orders of magnitude. While there is both an outer side in addition to a

mental or phenomenal inner sense of the Anthropocene, there is also a "mental inside" that belongs to a macrosubject whose experience is not directly equivalent to the sum total of the other macrosubjects who are all situationally and emotionally connected by the atmosphere contained within such a macrosubject. Of course, this macrosubject, which is instantiated or realized by a collection of other, albeit smaller, macrosubjects like ourselves and other biological organisms, would be something like the "biosphere" or the "natural world." Moods and attunements in this sense are not merely experienced *horizontally*, among natural individuals at a particular ontological level; instead, such moods are also experienced *vertically*, at varying orders of magnitude (Voigt 2018, 6). Nonconstitutive -- or emergent -- panpsychism, namely the "layered" view defended by Godehard Brüntrup and Gregg Rosenberg, to which I will return later, resonates with this inmost characterization of the Anthropocene, by suggesting that natural individuals tend to combine to produce higher orders of conscious experience at a different ontological level. On this view, macrosubjects such as human beings and the hypersubject specified here are *strongly* emergent (via intra-attribute emergence) from the microphenomenal properties of fundamental physical entities, but *not* radically or 'brutely' emergent in the same sense as emergentism, which is hindered by an intractable intelligibility problem to which panpsychism attempts to provide the solution. As such, macrosubjective unities exist 'through' their microscopic bases emergently, but not 'of' them in a way that is fully deducible from the microdeterministic notions of constitution, grounding, or realization, as *constitutive* panpsychism would have it (7). Furthermore, such unities, which are over and above[8] the basic arrangement of

[8] Morton offers a foil to this concept, "subscendence," which he defines as the notion that the whole is in some sense *less than*, and not "over and above" its parts (2016, 114). The concept of subscendence, however, does not refute the emergent panpsychist position, which is a metaphysical hypothesis; subscendence is simply a tool which allows us to dissect massively distributed hyperobjects, such as global capitalism, into its constituent parts in a way that is more digestible. Such hyperobjects, for all their size, are in fact ontologically small, Morton suggests, and hence far away from our circumspection, and "less" than the sum of their parts. As such, hyperobjects are exceedingly difficult to precisely define, comprehend, and address. If we attempt to understand the vectors that go into a given hyperobject, however, the problem is much more easily managed.

their microphysical supervenience base, can also effect downward causation on the physical microstructure, as in type-D dualism according to Chalmers. One might say, therefore, along with Voigt, that the Anthropocene is not merely a geological moment, but an age of *subjectivity*, more precisely the advent of a higher order of conscious experience (5). The concept of the Anthropocene as a living existential threat, however, places in sharp relief the fact that human life is not the metaphysical end or *telos* of physical reality. Rather, the Anthropocene not only ossifies the primary assumption of layered nonconstitutive panpsychism, to wit, the existence of different ontological spheres, but also the idea that humans can themselves be microsubjects whose phenomenal properties necessitate the emergence of even further complex phenomenal states. Thus, the macrosubject that results from such mental combination, in the same way that o-consciousness (or *organismal* consciousness, the kind of phenomenal consciousness belonging to organisms such as ourselves) results from the mental combination of microphenomenal properties at the fundamental physical level, would be a "hypersubject" whose mood and *Geist* pervades the entirety of biological reality:

> As the organisms on this planet, through their ecological interactions, have created and are maintaining a chemical atmosphere in which and by which they in turn live on different orders of magnitude, in the Anthropocene the subjects on this planet have created, through their various interactions as subjects, a mental atmosphere (a mood or patterns of moods). The production and maintenance of this mental atmosphere is embedded in the usual physical media into which those interactions are entangled—media which also turn out to be hyperobjects. These interactions of subjects within hyperobjects finally ground a subject for which the mentioned mood or mood-patterns are its proper mental state. This subject is a macrosubject chiefly grounded by other macrosubjects; inspired by the term "hyperobject" such a subject can be called "hypersubject". That would mean, on its inmost side, the so-called Anthropocene is the age of a global hypersubject which is grounded on the dynamics of the above-mentioned hyperobjects and on the subjectivity of its microsubjects involved in these hyperobjects and in the technosphere which they are forming. The hypersubject, so to speak, would be the ghost in the machinery of the technosphere. Or, to put it in a less drastic manner,

> it is the team-spirit which keeps us handling the switchboards of that machinery so that it does not stop. (8)

It should be noted that the human species itself can be understood as a hypersubject, in the sense that it is a massively-distributed entity that is "a geological force on a planetary scale" (Morton 2016, 9). At the level of the hypersubject, there ceases to exist individual human macrosubjects, but instead a transcendent hypersubjectivity whose phenomenal properties are the result of the mental combination of all individual human mental states. As such, every particular action made by a human agent plays some role in constituting or contributing to the Anthropocene. In continuation of this view, Morton holds that the 'Anthropocene' is in actuality the culmination of human activity which is fundamentally *viral* (84). Consequently, the Anthropocene is not possible until enough of these viral vectors of human activity are collectively capable of exerting downward causation on natural systems, but each of which requires only an *individual* actor in order to be set into effect. This is how, in Morton's terms, the single "key turning" of an automobile, while statistically insignificant, is, at the hypersubjective level, in fact simultaneously *billions of key turnings* equally contributing to the devastation of the natural world (8). It is not that an individual human actor is the source of climate change, at least at the "fundamental" *macrophysical* level, but once scaled up to a higher order of magnitude, this is precisely what appears to be the case. However, it is only upon viewing the human species as a hypersubjective unity, and at multiple ontological levels, that this observation can be made in earnestness. If we conceive of ourselves as objects among other objects (all of which contain phenomenal properties, as panpsychism claims), then the human species is a nearly inconceivably massive object which, like all other objects, stands in relations with itself and its

parts before entering relations with other objects (99).[9] On this view, then, ecological awareness not only involves attention to human particulars and other macrosubjective units such as other animals in the biosphere, whose phenomenal traits we in some part necessarily share horizontally by virtue of our common home; it also necessitates *vertical*, layered thinking, which is exactly what panpsychism permits.

As the reader may recall, the concept of downward causal powers in particular is that which nonconstitutive panpsychism attempts to preserve from microdeterminism. In addition, as the argument against dispositional essentialism exemplifies, such causal powers exist in the form of dispositional properties which on the panpsychist view are also understood as categorical. This is precisely the reason why macrosubjective entities are said to have conscious experience that is fundamental in the same way that the microphenomenal properties of microsubjective ultimates at the basic, physical level of reality are fundamental. Similarly, above the initial macrophysical level -- at which humans and other biological organisms thrive -- the moods, feelings, and motivations that constitute our own phenomenology, or our phenomenal properties as enminded beings, provide the metaphysical grounds for a hypersubject at what may be called "Earth magnitude." This hypersubject, as we have measured through the hyperobjects of the Anthropocene, perpetually withdraws from our circumspection much like the hyperobjects themselves do, due to its sheer size and ambiguity, which Morton defines as its "finitude" (2016, 16). For Morton, *all* entities, both human and nonhuman, have finitude by virtue of how they "withdraw" from direct access. As such, the nature of a thing is never completely exhausted by

[9] Graham Harman, who influenced Timothy Morton, suggests that instead of a hard "panpsychism," we should embrace what he calls "endopsychism," according to which to be 'conscious' means to be in the interior of a larger entity, and to 'exist' means to have an *interior*, and not necessarily to be *conscious* (2009, 254). But this could be just another way of interpreting conscious experience, as panpsychism concludes that consciousness *must* be intrinsic to physical entities. Indeed, more recently Harman has written more sympathetically about panpsychism, specifying that "primitive relations" between objects can be characterized as a form of mentality. Please see Harman (2017): *Prince of Networks: Bruno Latour and Metaphysics*, 211-214.

whatever descriptions and properties are attributed to it. In this sense, the categorical nature of an entity is intrinsic to that entity as a being with an inner psychic (mental) life, and which is not fully enfolded among the physical relations it shares with other physical entities. With respect to the hypersubjective unity found at Earth magnitude, the only way to positively conceive of such a subject would be to characterize it in terms of its phenomenal properties -- which are afforded it by mental combinations taking place at the macrosubjective level -- alongside its causal effects on those ontological orders which metaphysically precede it.

Though the hypersubject cannot be "found" in objective space and measured like discrete data, the dire effects that human production and consumption have produced on the Earth through agriculture and industrialization certainly *can* be measured, so we are forced to reckon with our own destructive capacities as a biological entity with the causal efficacy required of such cataclysmic potential. The human species, however, is not an abstraction, as it has been defined historically. Instead, "it is better to think with Feuerbach that the human is not an abstract category but an actually existing being residing at a very large scale," that is, as a hypersubject with determinate phenomenal properties. (151). The concept of the hypersubject, especially a hypersubject which by its very nature is withdrawn from direct observation, permits us to think about how actions taken at the *individual* macrosubjective level, when scaled to Earth magnitude, actually immediately affect the state of affairs that govern the era of the Anthropocene. Not only this, but the hypersubject also reveals a deep intersubjective resonance between all particular agents whose phenomenal properties establish an emergence base for its existence. Thus narcissism, the guiding factor of human vanity and its exploitation over parts of the biosphere, must be redefined, along with the "physical," in order to embrace a social (and *conscious*) community of subjective entities who all necessarily must narcissistically vie for the

basic right to exist in the world (Voigt 2018, 9). It may turn out that the solution necessary for overcoming the worst effects of the Anthropocene may not be the top-down solutions (e.g., neoliberalism, technocracy) with which we are intimately familiar and which have become obstinately habitual, but indeed one that respects and upholds the autonomy of those beings which have been neglected: honey bees, mycelium, and coral reefs. What is evident, however, is that interpreting the ecological crisis in terms of a panpsychist metaphysics will certainly help us understand the era of the Anthropocene and our primordial relationships with all things, both living and nonliving.

3 Arguments for Panpsychism

In the preceding pages, I have explicated the most important metaphysical positions to which panpsychism must respond: physicalism, dualism, and Russellian monism, and addressed their respective, seemingly insoluble complications. What is more, I have argued that panpsychism, while it may appear to be incoherent at first blush, in the final analysis is a powerful tool by which we can redefine and address problems not just in the philosophy of mind and metaphysics, but with respect to other philosophically-relevant issues such as the ecological crisis. I would be remiss, however, to not include the particular arguments that have emerged in support of an explicitly panpsychist metaphysics, because panpsychism is not just useful hermeneutically, but also represents an authentic solution to the standoff between physicalism and dualism in the philosophy of mind by preserving what is advantageous to both while dispensing with what is problematic and unresolvable. One may suspect, on solid grounds, that the arguments that follow cannot apply to every particular kind of panpsychism, which cannot be denied. But in the event that physicalism, dualism, and non-panpsychist Russellian monism have clearly demonstrable flaws that are potentially remedied by panpsychism, and given that each legitimately panpsychist model accepts a certain set of common assumptions, each perspective consequently finds a place in the overall structure of the arguments. Mørch (2014, 26) has provided a convenient list of these common premises shared among the many panpsychist ontologies, all of which can be gathered from what has already been addressed about panpsychism broadly speaking:

> (i) There is an epistemic gap between the domains of the physical and the phenomenal which is not bridgeable in principle.
> (ii) Such epistemic gaps, which concern the *conceivability* of a particular worldview, entail ontological disparities, which concern the *metaphysical possibility* of that worldview.

(iii) There is nothing about the ordinary conception of physical reality by virtue of which consciousness can intelligibly emerge.
(iv) "Brute," super-strong, inter-attribute emergence is not possible.
(v) Consciousness is not epiphenomenal, i.e., consciousness is causally relevant.
(vi) Given (micro)physical causal closure, there is no systematic overdetermination, i.e., consciousness has a determinate sufficient cause that can be deduced from microphenomenal facts.
(vii) The (micro)physical is causally closed.
(viii) Consciousness is not instantiated by properties that have no positively conceivable identity.

This set of principles, which is derived from contemporary philosophy of mind, represents the basic presuppositions that most, if not all, panpsychist positions take, and it is from these principles that we most commonly receive arguments in support of panpsychism. With that said, there are three main sets of arguments that are prominent in contemporary panpsychist literature, and they are the argument from philosophy of mind, the argument from metaphysics and philosophy of science, and a final argument from causation and the experience of agency.

3.1 The Argument from Philosophy of Mind

The argument from philosophy of mind specifically concerns the hard problem of consciousness, which is the problem of providing an adequate explanatory account of phenomenal experience in a universe governed by a microphysical structure that is devoid of phenomenal properties. In this sense, most philosophers of mind begin with the perceived "facticity" of consciousness before attempting to systematically integrate it into physical descriptions of the world. If this were not the case, then the hard problem would merely be another "easy" problem, which would imply that it would be solvable by the typically reductive, narrowly physical means provided by physicalism. Given the shortcomings of physicalism, dualism, and non-panpsychist Russellian monism on this very issue, the overarching theme of the argument from philosophy of mind is

that panpsychism is the only ontology that successfully integrates consciousness into the physical portrait of the world. In other words, only panpsychism allows us to both preserve the broadly naturalistic framework secured by the natural sciences[10] while intelligibly accounting for the existence of conscious experience, the existence of which panpsychism presupposes. Furthermore, panpsychism avoids the primary problems associated with physicalism and dualism, namely, the intelligibility problems of physicalism and the empirical problem of dualism. Not only this, but panpsychism also provides the solution to these problems in a way that preserves the virtues of elegance and parsimony requisite of an effective solution, unlike many other types of Russellian monism.

Recall that physicalism commits to some conception of the world that is fundamentally unintelligible. Type-A physicalism denies our intuitive relationship to consciousness as unified subjects. Type-B physicalism resorts to *a posteriori* necessities and primitive identities, i.e., identifying phenomenal states with corresponding physical or functional states in a way that acknowledges the empirical gap, but rejects the ontological gap. Type-C physicalism ultimately collapses into another position. Finally, emergentism holds that consciousness is brutely emergent, or otherwise accepts epiphenomenalism or overdetermination, which are not true forms of physicalism. These complications are understood as the intelligibility problems of physicalism, which seriously threaten the tenability of its metaphysics. Panpsychism avoids these intelligibility problems, however, because it is not predicated on any such principles, and does not hold that consciousness is a) inexplicably emergent from, b) identifiable with, or c) reducible

[10] This is certainly not to say that the natural sciences normally abide a broadly naturalistic perspective; as is most often the case, the natural sciences presuppose *narrow* physicalism, and thus encounter the problems attached to the worldview. However, as indicated before, broad physicalism can be coherently integrated into the natural-scientific conception of the physical which, given how we have defined "real" or "broad" physicalism, would necessarily have to include some physical account of phenomenal properties. The argument for broadening the scope of the physical, which is also the panpsychist argument, is motivated by how the narrow physicalist view *cannot* incorporate phenomenal properties into its ontology.

to, properties that are fully exhausted by scientific or otherwise physical interpretations of the universe and its structure (Mørch 2014, 20). Instead, panpsychism assumes that the phenomenal is logically and metaphysically antecedent to physical structure, and hence grounds, realizes, or instantiates that physical structure and the dispositions of fundamental physical entities. When the language of composition and grounding proves insufficient, in the case of nonconstitutive panpsychism, then it states that complex macroexperience is metaphysically primitive, or also found at the fundamental level of reality. In the final analysis, however, both of these perspectives evade the specific intelligibility issues that confront physicalism.

On the other hand, dualism suffers from an empirical problem on par with that of the intelligibility problems of physicalism. If every physical event may be traced back to a sufficient cause that is itself physical in the narrow sense adopted by both physicalism and dualism, then dualism does not appear to be able to adequately fit consciousness into the currently accepted scientific framework, especially with respect to the physical model of causality (17). Although the special intelligibility problem for dualism -- which claims that the correspondence between the physical and the phenomenal is incoherent -- is generally rejected by contemporary defenders of dualism, the problem of squarely reconciling a parsimonious theory of consciousness with natural science nevertheless remains for dualism, and threatens to leave the question of conscious experience unanswered. For type-E dualism, consciousness and the experience of macrosubjective causal efficacy are both illusory. For type-O dualism, subsequent physical and phenomenal states are causally overdetermined, in which case causality cannot be exhaustively accounted for. While type-D dualism is not nearly as problematic as the epiphenomenal and overdeterminist views, especially by virtue of how it is reasonably compatible with emergent panpsychism in some forms, panpsychism in general evades the empirical problem because it

does not posit additional, unnecessary causal relations to those already accepted by physical science in a way that violates causal closure (20). For panpsychism, consciousness is not ontologically distinct from the physical, but it causally necessitates the very manner in which physical structure and corresponding dispositions are arranged, which is why it is preferable to the dualisms listed above.

Chalmers (2017a, 22) is credited with a conceivability argument against physicalism, where P is the conjunction of all microphysical truths about the universe, and Q is some arbitrary phenomenal truth, e.g., "I am conscious":

(1) P & ~Q is conceivable.
(2) If P & ~Q is conceivable, then P & ~Q is metaphysically possible.
(3) If P & ~Q is metaphysically possible, then physicalism is false.

(4) Physicalism is false.

Here it is clear that Chalmers is utilizing some familiar terminology and reasoning. According to the list of principles listed earlier, panpsychists assume that ineliminable empirical gaps exist between the physical and phenomenal realms, given our common sense understanding of the "physical," which is most often conceived in terms of narrow physicalism. Moreover, panpsychists assert that such empirical gaps, which concern the conceivability of the assertion in question, entail ontological gaps, which represent the actual metaphysical possibility of the assertion. Chalmers' conceivability argument, which he claims is the strongest objection to physicalism, falsifies physicalism by demonstrating that, in theory, the microphysical structure of the world could be the same in some other universe yet produce a person who is physically identical to a conscious person in our universe, but who does not have such conscious experiences. That is to say, it is conceivable that all of physics could exist in precisely the same

manner, yet produce a zombie with no phenomenal properties whatsoever. If this were the case, in some hypothetical universe, then physicalism would be proven false because consciousness would not be completely reducible to the narrowly physical functions or dispositions on which it is founded. It should be noted that the different kinds of physicalists would object to some of these premises: type-A physicalists would reject premise (1) on the grounds that there is not really an epistemic gap in actuality, and type-B physicalists would concede to premise (1) but reject premise (2) on the grounds that perceived epistemic gaps do not necessarily entail ontological gaps (23). As it has been shown, however, both of these views presuppose certain principles that are difficult to accept, and are hence subject to the problems of intelligibility.

Physicalism has its own argument against dualism, the other traditionally held belief. This objection issues from the notion of causality accepted by dualism, and is thus called the causal argument:

(1) Phenomenal properties are causally relevant to physical events.
(2) Every caused physical event has a full causal explanation in physical terms.
(3) If every caused physical event has a full causal explanation in physical terms, then every property causally relevant to the physical is itself grounded in physical properties.
(4) If phenomenal properties are grounded in physical properties, then physicalism is true.

_____

(5) Physicalism is true. (2017a, 23)

The causal argument illustrates that dualism, as it is generally understood, *must* refer back to a physical causal nexus if it is to intelligibly locate phenomenal properties in the physical world. Physicalism would then be true because it reduces such phenomenal properties to, or identifies them with, corresponding physical states, thereby preserving the causal closure of the microphysical, or the fundamental level of reality described by physics. However,

epiphenomenalism (type-E dualism) rejects premise (1) because it rejects the causal efficacy of phenomenal states; interactionism (a type-D dualism) rejects premise (2) on the basis that it allows for phenomenal states to serve as sufficient causes for physical states; and type-O dualism rejects premise (3) because it holds that phenomenal states are not directly traceable back to expressly physical causes, and are therefore systematically overdetermined (24). But common to all of these worldviews is the problem of causal closure, or the empirical problem, so it seems as if neither physicalism nor dualism provides a unified account of consciousness.

From the standpoint of contemporary philosophy of mind, a more suitable ontology would be compatible with both the conceivability argument for physicalism and the argument from causal closure for dualism and, as it turns out, *panpsychism is the logical synthesis between the two perspectives*. This is due to the fact that, first of all, panpsychism claims that a narrowly physical identical universe could conceivably (and possibly) produce a zombie, but *not* a broadly physical identical universe, because microphenomenal structure metaphysically necessitates macrophenomenal structure, and microphysical ultimates *always* have phenomenal properties. The distinction between narrow and broad physicalism is particularly relevant here, as narrow physicalism preserves a restrictive microdeterminism consisting of only microphysical properties, whereas broad physicalism, which is commensurable with panpsychism, enables microphenomenal properties in addition to microphysical properties to secure causal efficacy. Narrow physicalism leads to merely *microphysically* identical zombies without conscious states, or *structural* zombies, but broad physicalism posits *categorical* zombies, or zombies without conscious states which are both microphysically and *microphenomenally* identical to us (28). While panpsychism concedes that structural zombies are conceivable and possible in principle, it denies that these second, categorical zombies are as well, because it rejects that a broadly

physical copy with exactly the same microphenomenal properties could exist without conscious experience. Secondly, microphenomenal properties, and not merely narrowly (micro)physical properties, provide the sufficient causes that determine the nature of macrophenomenal and macrophysical properties. Not only this, but as discussed at length previously, panpsychism also avoids the major philosophical intelligibility and empirical problems of both physicalism and dualism, respectively. As such, the argument from philosophy of mind concludes that only panpsychism can start with the authentic existence of consciousness and suitably merge it with the physical world, assuming that we take a broadly physical worldview.

Nagel, in his famous "What Is It Like to Be a Bat" (1974), argued that the very presence of consciousness in our experience is that which "makes the mind-body problem really intractable" (435). This is because the usual reductive accounts of subjective experience in living organisms, especially those made by physicalism, are independent of phenomenal facts. In the case of functionalism (type-A physicalism), for example, functional states -- to which phenomenal states essentially reduce -- are compatible with structural zombies as Chalmers defines them. As such, Nagel suggests that, much in alignment with Strawson and other panpsychists, the concept of the "physical" needs revision, given that phenomenal states seem to represent an elusive kind of physical fact that defies the vocabulary and theoretical framework that we normally attribute to other objective, physical events. However, unlike these other easily reducible events, Nagel claims that abstracting from the qualitative dimension of subjective experience actually detracts from the truly objective representation of any particular phenomenal state:

> [I]f the subjective character of experience is fully comprehensible only from one point of view, then any shift to greater objectivity -- that is, less attachment to a

> specific viewpoint -- does not take us nearer to the real nature of the phenomenon: it takes us further away from it. (444-445)

This view should seem very familiar, given how Strawson defines "real physicalism," which takes a broadly physical worldview. If what is physical is redefined inclusively, that is, to include phenomenal properties, then panpsychism is a natural outcome, which Nagel (1979) holds is the only consummately "physical" view that can avoid the brute emergence problems of other physicalist positions. Nagel proposes four additional principles of panpsychism in conjunction with those already provided by Mørch:

> (i) Material composition: Any particular life form is a complex arrangement of material (physical) components, all of which are satisfactorily explained on the basis of physical descriptions, and which are common to all other physical things.
> (ii) Nonreductionism: Phenomenal states are irreducible, and cannot be deduced from the physical properties of living organisms alone.
> (iii) Realism: In spite of (ii), phenomenal states really do exist for living organisms, i.e., they are properties of *something*, and not nothing.
> (iv) Nonemergence: Nothing, including phenomenal states, can inexplicably emerge from physical systems.

To avoid the reductive and radically emergent tendencies of physicalism, Nagel specifies that panpsychism requires an intelligible causal relationship between a physical state and its corresponding phenomenal state, and in which the physical logically and metaphysically necessitates the phenomenal (187). However, according to physicalism, there is nothing about narrowly physical properties by virtue of which phenomenal states are necessarily entailed; panpsychism therefore enlists the concept of intrinsic or categorical natures that are causally responsible for such phenomenal states, which exhibit clearly discernible subjective features that are restricted to a singular point of view and are not exhaustively accounted for by physical descriptions. These subjective features, which constitute the point of view of a conscious being,

do not strictly 'belong' to an "organism," which Nagel defines as a lifeless composite of insensate matter, but rather to the macrosubjective whole that is in some sense over and above the components that go into its physical make up. This is just one of the ways in which panpsychism allows us to retrieve a more ecological conceptualization of the world: physically smaller entities not only have phenomenal properties themselves, but those properties which categorically belong to such entities are necessary to the structure of higher magnitudes of being, which not only embraces, but *exceeds* the order at which human life is made possible. To suggest that subjective experiences are not irreducible in this sense is a serious threat to the realism that any true physicalist, for both Nagel and Strawson, must accept. In order to account for this qualitative difference, then, Nagel concludes that there must be phenomenal properties of microphysical particles that can intelligibly combine to produce higher-level phenomenal states, similarly to the manner in which a biosphere containing millions or billions of conscious organisms constitute a hypersubjective unity at Earth magnitude, as mentioned above. If consciousness represents the *pour soi* (for-itself) of subjectivity, the inner psychological life of its experiencer from which only one point of view can be taken, then it may not be derived from the *en soi* (in-itself) of a publically neutral, "objective" interpretation (188). This means that even the categorical nature of microphysical entities such as protons and electrons is not fully exhausted by what empirical science says about their physical structure and dispositions. Panpsychism respects this idea, for it assumes not that the for-itself is derivative from the in-itself, but that the intrinsic nature of an entity is in some sense equatable with and representative of its subjective experience. Panpsychism does not, however, assume that it can clearly represent what the subjective point of view native to such experiences *is like* for a

particular subject, but this fact is indicative of the irreducibility of consciousness, which is always a consciousness *for* something.

3.2 The Argument from Metaphysics and Philosophy of Science

The second argument, from metaphysics and the philosophy of science, does not start with the facticity of conscious experience, but rather the problem of *metaphysical grounding*, i.e., the notion that the physical structure of the world, whose description is afforded by the natural sciences, needs a grounding agent to account for the manner in which such structure is organized in the universe (Mørch 2014, 38). The first argument, from the philosophy of mind, issues directly from the existence of consciousness and attempts to intelligibly integrate it into our currently accepted physical conception of the universe. On the other hand, this second argument holds not only that the explanatory gap between the physical and phenomenal domains *must* be filled to be ontologically solid, but that only the *intrinsic* or *categorical properties*[11] postulated by a panpsychist metaphysics can fill this role. Furthermore, the motivation for the argument is independent from the hard problem of consciousness in the philosophy of mind, although it shares with proponents of the philosophical argument the sentiment that science can only provide the structural or relational character of the universe, and thus lacks a determinate account of the categorical nature of physical things (28). In spite of the difference between the separate arguments' points of departure, it should be evident that both complement each other well, because in some sense philosophy needs something to do with the problematic existence of subjective experience, and metaphysics requires a metaphysical base that gives definition to the physical dispositions it makes empirically accessible. If this unnecessarily "additional," or

[11] A note on terminology: although the terms 'categorical' and 'intrinsic' are normally used interchangeably, the 'categorical' is specifically used in contrast with the 'dispositional', and *not* the relational or extrinsic (Mørch, 2014, 30-31).

seemingly inconsequential subjective experience (especially by physicalism's standards) fills in the metaphysical role necessitated by the natural sciences as a categorical or intrinsic nature, then both problems are simultaneously alleviated, and this is precisely what panpsychism allows for.

The argument from metaphysics and the philosophy of science derives its potency in particular from the argument from categorical or intrinsic natures, on which I have briefly remarked throughout this thesis. The argument from categorical or intrinsic natures is the thesis according to which 1) empirical science, namely, physics, only provides the dispositional or relational character of physical entities (which is also Russell's insight); and 2) physical structure, which consists of such physical relations, cannot operate as it does or be formatted as it is without categorical realizers that metaphysically ground the relations between physical elements. Brüntrup affirms that this metaphysical base is the "carrier" of physical structure without which the particular instantiations of physical dispositions would be wholly arbitrary (2009, 8). The problem of metaphysical grounding, according to Brüntrup, may therefore be understood as the "ultimate carrier problem," as it identifies the need for an absolutely intrinsic, fundamental carrier that determines the arrangement and function of physical relations (8). As intimated before, the ultimate carrier role is neatly filled by the intrinsic nature of fundamental physical particles, as the phenomenal properties of ultimates at the microphysical level would provide the metaphysical "software" required of physical structure by instantiating phenomenal properties that emerge at the macrophysical level, effectively eliminating the empirical and ontological gaps between the physical and the phenomenal. This means that the existence of intrinsic microphenomenal properties tends to avoid the seemingly inescapable problems of physicalism and dualism as we have explored in detail. Alternatively, on Brüntrup's view, the carrier thesis represents a "realistic monism" in which radical, inter-attribute emergence of

macrophenomenal properties is avoided in favor of a softer, intra-attribute emergence which still accepts the existence of microphenomenal properties at the fundamental physical level (4). This is what differentiates panpsychism from other forms of Russellian monism: for panpsychism, *all* microphysical entities contain phenomenal properties which are positively conceivable, in the sense that such properties constitute what it is like to be the entity in question. Given that we already intuitively know what it is like to have intrinsic properties, by virtue of our own conscious experience, not only can we theoretically conceive of such properties, but consciousness (by way of phenomenal properties) appears to be the most theoretically elegant and parsimonious candidate to play the categorical grounding relation necessitated by a causally intelligible physical world:

> [I]f objects are mere nodes in a relational graph with no intrinsic nature, then too many relational graphs are possible. Since science deals only with the relational structure, not the intrinsic natures, we can never know the one true story about the world in a metaphysical-realist way. We have too many "truths." (2)

The existence of categorical instantiators, i.e., phenomenal properties in panpsychism, is fundamentally at odds with one of the most prominent positions in philosophy of science: structural realism. Distinct from classical scientific realism and scientific anti-realism, structural realism rejects realism about categorical or intrinsic properties and accepts realism regarding physical, relational structure (Brüntrup 2011, 15). There are two different kinds of structural realism: epistemic and ontological, the latter of which has both moderate and eliminative variations. According to epistemic structural realism, non-structural properties must exist, but they are ultimately unobservable, and hence have no determinately conceivable nature and are not accessible to scientific investigation. This should immediately sound familiar, given what we already understand about Russellian monism in the philosophy of mind, which is often

contingent on the existence of intrinsic properties that are not fully positively conceivable. On the other hand, according to ontic or ontological structural realism, non-structural properties are completely inconceivable and unnecessary, leaving only physical entities and the relational structure in which they are found. With this said, epistemic structuralism seems perfectly compatible with a broadly conceived physicalism, whereas ontological structural realism is confined to the narrow physicalism that panpsychism refutes. Moderate ontological structural realism holds that both objects *and* their relations exist; conversely, eliminative ontological structural realism holds that *only* the relations between objects are ontologically relevant, and that relata should be removed from our ontology. William Seager suggests that the "relationalist" view in the philosophy of mind is essentially equatable with that of ontological structuralism, and "which asserts that all there is to matter is the set of inter-relationships which science reveals" (2006, 8). While relationism may appear to be the same as functionalism, the type-A physicalist position, Seager notes that there is a fundamental difference: functionalism presupposes that the properties of physical entities play a role in realizing the network of relations that is produced, whereas relationism "dispenses with the realization requirement" (10) by holding that only the relational structure is necessary to the ontological solidity of the physical actors in question.

A prominent argument against structural realism is that of Max Newman, who asks, if there are no objects and no intrinsic, categorical properties, as ontological structural realism (OSR) affirms, then what makes it the case that the world has the mathematical or dispositional structure that it actually has and not some other mathematical structure? In other words, if, according to OSR, all that we know about physical objects is their cardinality, which means that we know nothing of their intrinsic nature, then what is preventing the system of relations from

instantiating in some way other than the way they do? Unless there is something intrinsic to the objects, of which the system of relations is considered trivially true, then there does not seem to be a valid reason as to why, precisely, such objects would have the dispositions they do and not some other set of dispositions. This leads to what Brüntrup previously defined as the "carrier problem," which suggests that the relational structure between physical entities needs to be grounded by a "nonstructural configuring agent" (2017, 52), that is, by intrinsic mentality. According to this notion -- the existence of a categorical 'carrier' -- if a cause of a physical process had different intrinsic properties, then it would lead to a fundamentally different effect, which preserves the causal efficacy of intrinsic properties (60). In contemporary physics, some defenders of OSR have argued that the objection provided by Newman's argument only applies to epistemic structural realism, because most commonly for physical science, objects (or relata) discovered within the relational matrix are likened to 'points' on a spatiotemporal field and are void of any intrinsic properties (Brüntrup 2011, 23). If, however, physical properties of fundamental particles are basically reducible to spatiotemporal extension, as OSR assumes, then there would be nothing by virtue of which physical properties could be distinguished from unoccupied 'points' in spacetime (Mørch 2014, 33). Because of this problematic conception of the physical, not even OSR can avoid Newman's critique:

> [I]t seems Newman's worry about indeterminacy can be generalized to ontic structural realism. The core of Newman's worry can be regarded as being that every abstract logico-mathematical structure or relational system exists, in the same way that we say that every number abstractly exists (and the existence of a number as a relational entity seems to entail the existence of the entire relational system of numbers). In contrast, the concrete structure of the world, of which there is only one, must have some non-mathematical and non-structural qualities. (33)

Gregg Rosenberg's "No Alternative" view is a nonconstitutive perspective that conceives of intrinsic properties as an overlapping mesh of ontological "layers" (the economic, social, biological, … and so on, down to the broadest, most fundamental level, the physical) (Coleman 2009, 91). On this view, each "layer" contains properties which are intrinsic to each particular existential level, but which are contingent on principles that are extrinsic to that level and intrinsic to another, more basic level. For example, the economic principle of purchasing goods 'rides on' the ontological solidity of more fundamental principles such as the existence of desires and needs that are external to the economic circle, yet *intrinsic* to something like the "biological" or "physiological" sphere at a lower level (91-93). This is essentially compatible with Brüntrup's carrier thesis, which claims that physics (the lowest, most fundamental ontological level) must also rely on categorical or intrinsic properties. As Brüntrup says himself:

> Biology as an abstract functional system is carried by the mechanics of molecular biochemistry, psychology by the dynamical properties of the neural system, economics by the needs and desires of individuals. The crucial question, however, is: What carries the most basic physical level? (2017, 56)

The difference at the level of ultimate physical particles is that such entities are not contingent on intrinsic properties at some other level, but instead on *absolutely intrinsic properties* that make each component -- photons, atoms, quarks, etc. -- intelligible as the element they are and the physical function they play. Specifically as regards the argument for panpsychism, these properties would be phenomenal properties which are not intrinsic to any particular system in the way that other physical properties are; instead, they are wholly intrinsic to themselves. Coleman states that "ontology clearly requires such [absolutely intrinsic] properties" that are not sufficiently explained on the basis of typical, narrowly physical descriptions (92, *brackets mine*). If such absolutely intrinsic properties did not exist innately in physical entities, then physical

ultimates must metaphysically and logically supervene on some lower ontological sphere, just as economic principles logically supervene on the biological or physiological. Because there is no more primary level than that of fundamental particles, then phenomenal properties -- which we intuitively know are absolutely intrinsic in the sense described -- provide the supervenience base for all that exists, both physically and phenomenally. Regarding the ecological question, one would merely need to extrapolate the inference made from Rosenberg's layered ontology, which hinges on the existence of multiple ontological orders of existence. At Earth magnitude, the macrophenomenal properties of macrophysical individuals would provide the supervenience base for even further macrophenomenal states, i.e., belonging to the hypersubject, or the biosphere which is under direct threat of the destructive vectors of untempered human activity at a lower order. As such, the directly observable and measurable effects, which we have characterized as the "hyperobjects" of the Anthropocene, are only partial representations of the inconceivably massive changes occurring at the level of the hypersubject. While we may see a loss in individual species contributing to total biodiversity on Earth, this is only a symptom of the effects transpiring in the biosphere, yet gestures toward what measures must be enacted in order to prevent the worst possible outcomes from such activity which have already taken effect, and which may only be measured after they have already manifested as discrete, measurable data as hyperobjects in the human (macrosubjective) realm. It is in this sense that panpsychism, which enables us to think vertically in this way, offers tremendous utility with respect to better understanding these phenomena, and thus addressing them in a timely and expeditious manner.

If physical dispositions do not exhaust the nature of physical entities, as panpsychism suggests, then what this means is that the nature of such entities must be irreducibly *non-relational* (88). It is in this sense that categorical phenomenal properties are said to "differ"

from the physical structure that they realize. This is also why panpsychism is also accused of dualism, because the differentiation between the categorical and the dispositional appears to lend toward dualism. While this argument presents a challenge to panpsychism, the constitutive difference between the phenomenal and the physical is not strictly ontological; rather, in light of panpsychism it does not make sense to divorce the categorical nature of a physical thing -- which for panpsychism is the phenomenal properties innate to physical reality -- from its relational character, or how it finds itself in the causal nexus. As mentioned above in the section on the argument from philosophy of mind, the broad physicalism accepted by panpsychism does not permit the metaphysical possibility of categorical zombies, or physically identical copies of ourselves (specifically, with the same categorical properties) which lack the same manner of conscious experience. Accordingly, any view according to which physical entities may exist independently of intrinsic realizers is immediately inconceivable, so the worldview that panpsychism defends is not authentically dualistic, because the phenomenal and the physical would need to be wholly self-sufficient, which is precisely the source of the empirical problem for dualism. Categorical properties, however, do not necessarily have to be exclusively non-relational and can indeed have some dispositionality, but only insofar as the properties are not merely dispositional (Mørch 2014, 35). For instance, certain phenomenal states, e.g., needing to use the restroom, certainly *dispose* us toward taking particular actions, i.e., actually using the restroom, by issuing directives which are not fully accounted by narrowly physical causal explanations. For narrow physicalism, there is always a "remainder" left over from the explanations that it provides, which undoubtedly account for the dispositional or structural aspect of phenomenal states, and this remainder (i.e., consciousness, or phenomenal states) is what is irreducibly intrinsic to whatever *is* reducible to the physical.

Following Gregg Rosenberg's "No Alternative" argument, and in light of the existence of categorical grounding agents at the foundation of physical reality, Brüntrup claims that properly unified physical entities should not be considered mere "substances" as they are typically conceived according to narrow physicalism, which is to say, as stagnant, composite objects without intrinsic qualities whose categorical feature is to simply abide through time. However, such substances, Brüntrup continues, are also ontologically self-sufficient in the sense that "they do have an intrinsic nature that is not bestowed on them by entering certain accidental relations" (Brüntrup 2009, 1). As such, in addition to what is already understood about it, a substance is that which is able to stand alone, by itself, which considerably widens the scope of what may constitute a substance in actuality. Because of the highly contentious nature of the term "substance," Brüntrup prefers to redefine them as "natural individuals," which "are 'natural' because they are to be distinguished from artifacts like computers or TV sets," and "individuals because they are to be distinguished from mere conglomerates, like a pile of stones or a cloud formation" (1). For Rosenberg, the universe is ultimately made up of two different properties: effective properties, which are properties that establish *constraints* within a causal nexus; and receptive properties, which are properties that *bind* to effective properties in such a way so that a causal nexus is created. In the event that either an effective or a receptive property is metaphysically primitive, i.e., it is ontologically fundamental (along with other microphysical or microphenomenal ultimates), then any given property would be, by this definition, a natural individual.

Insofar as primitive effective and receptive properties contribute to effecting and setting boundaries to the causal structure of the physical world, and given that such properties require intrinsic carriers to perform their functional roles, Rosenberg makes explicit the relation between

phenomenal properties and causality: "the experiencing of phenomenal properties *is* the causal nexus in our world. Anywhere there is direct interaction between natural individuals, there we will find the occurrence of experiencing" (2017, 167, *emphasis original*). As such, instead of a univariable causality that is fully determined at the microphysical or microphenomenal level -- the charge Brüntrup makes against constitutive panpsychism -- according to Rosenberg, causal nexuses are introduced at all levels of existence in which new natural individuals of all levels of complexity are found, and not just at the fundamental physical level. This presupposes a complex hierarchy of different causal nexuses, the "layered" perspective as previously mentioned, because one cannot divorce causality from what is experienced at any ontological sphere. While individuals at lower levels are not always in determinate states, the existence of determinate states implies the existence of higher-level causal nexuses that make the world determinate (169). In other words, the primitive natural individuals found at the macrolevel obtain novel causal powers that are not fully determined by microphysics at the fundamental level, as Brüntrup has argued. This is precisely how the hypersubject of the Anthropocene is afforded its own set of causal powers, in the sense that the collective participation of natural individuals at lower ontological orders combine to produce effects on the entirety of biological reality. However, it is important to note that the "layered" ontology allows for particular levels to simultaneously realize subsequent levels *and* remain essentially unchanged in the process, which is precisely how different kinds of natural individuals -- such as humans and other macrophysical organisms -- can exist alongside the subjective atmosphere engendered by the Anthropocene and the existence of a hypersubject.

In contrast to the layered worldview of Brüntrup and Rosenberg, Seager offers his own account of categorical properties, which he defines as "combinatorial infusion." Seager refers to

Nagel's argument, who assumes that if consciousness is either fundamental or emergent, and that consciousness can *never* be inexplicably emergent, then it must be the case that consciousness is fundamental. However, Seager contentiously claims that consciousness is emergent *even if we endorse panpsychism*, because he does not see how the physical can remain causally closed if we presume the existence of metaphysically primitive causal powers *and* a narrowly physical worldview, as is often the case in the emergent forms of physicalism and dualism. Consequently, we must make a distinction between the "radical" emergence of physicalism and dualism, and what Seager terms "conservative" emergence, according to which "a conservatively emergent property of an object O is one whose exemplification by an object follows logically from the specification of the properties of O's constituents (plus environment) and the laws governing these submergent properties" (2017, 232). While this appears to be analogous to the differentiation Brüntrup makes between super-strong and strong emergence, conservative emergence in Seager's usage is also representative of the "weakly" emergent properties of typically physical entities, such as when hydrogen and oxygen combine to produce water with primitive physical properties that are not found in either of the constituent elements. The difference between 'conservative' and 'strong' emergence, however, only seems to be primarily semantic, so the two may be reasonably compatible with each other. This is particularly likely because Seager, like Brüntrup and Rosenberg, also defends a version of nonconstitutive panpsychism, which takes the existence of fundamental macrophenomenal properties as a presupposition. Unlike the layered ontology, combinatorial infusion entails that

> the transmutation from the hypothetical micropsychic features assigned to the fundamental entities of the physical world to the macrostates of consciousness with which we are introspectively familiar requires the generation of a new state which infuses its precursors, or ... substitutes a new state for the set of precursor states. (238)

On this view, new conscious states would be 'conservatively' emergent after a certain "mental chemistry" between phenomenal properties -- which is presently unknown to us -- is met, through a process of mental fusion that is not itself reducible to the microphysical entities that combine to create the conditions necessitated by mental fusion. Additionally, "consciousness" would be best understood as "the expression, in the realm of the mental, of the kind of physical complexity that occasions mental fusion" (241). On this view, microphenomenal properties would fuse to produce the higher-level macrophenomenal states that are native to macrophysical life forms, such as ourselves. However, unlike the layered perspective provided by Brüntrup and Rosenberg, combinatorial infusion does not "preserve" the microphenomenal individuals that instantiate subsequent macrophenomenal states. That is, the process of infusion essentially dissolves the individual nature of each constituent microphenomenal element and replaces it with that of the organic whole that results from combination. Mørch, who defends her own theory of phenomenal fusion, explains this process further, in terms of macroexperiences:

> Macroexperiences, according to the account I have offered, are fusions. Entities that go into a fusion lose their individual identities. They exist as proper individuals (with both form and matter intact) only in the causal history of the fusion. They also potentially exist in the future caused by the fusion, since fusions can be undone. They can, in a manner of speaking, actually exist within the fusion, if the fusion has parts or sections that resemble the entities that went into it. But these parts do not exist in same the [*sic*] fundamental sense that the fusion itself exists. A fusion is a whole that is existentially prior to its parts. (2014, 185)

Based on how Mørch defines fusion as it relates to the creation of macroexperiences, it does seem that the fusion view may be commensurable with layered panpsychism after all. It appears to be a matter of how one characterizes the particular identity of a microentity in relation to the unified whole of which it is but a single component. In the case of the human brain, Mørch continues, it certainly does not seem as if the experiential whole precedes its parts, i.e., the

neurons and other microphysical particles that constitute it. However, unlike neurons and other microphysical ultimates, the brain does not cleanly fit the category of "objecthood" by virtue of its perceived causal efficacy that is not captured by inference to its microphenomenal realizers (187). In this sense, the brain, and macrophenomenal entities more generally, simply do not behave like objects as we have defined them; indeed this ontological difference is what leads us to question whether such entities are more than mere aggregates or conglomerates, to borrow Brüntrup's words. What is needed for macrophenomenal states, in any event, is the existence of microphenomenal states which are, similarly to unified macroexperience, metaphysically antecedent to physical structure. For as Mørch concludes, "if the laws of macrophysics need a mental explanation or underpinning, then the laws of microphysics should need one as well – both being brute patterns. That both equally need mental explanation or underpinning, in the form of Russellian grounding, is exactly what panpsychists think, and this seems to be the less ad hoc conclusion" (214).

As for the principle guiding the way in which the microphenomenal combine or fuse to produce more sophisticated macroscopic organisms, Philip Goff argues that there could be some state of affairs, or a hidden relation, between microphenomenal entities that initiates combination, fusion, or some other means of constitution. This obscure relation Goff calls the "phenomenal bonding principle," which holds that the terms that lead to the emergence of macroexperience are necessitated by a state of affairs at which microphenomenal elements arrive at some point during their interaction (2009, 132). The "No Summing of Subjects" argument (NSS) states that the existence of a group of subjects S_1, … Sn which instantiate certain phenomenal states, *never* necessitates a subject of experience T in such a way that the phenomenal character of T is different from the phenomenal character of any one of S_1, … Sn

(130). As Goff later points out, NSS, which is at the heart of the combination problem for panpsychism (next section), assumes that there is both a conceptual isolation of subjects (CIS) and a metaphysical isolation of subjects (MIS). According to CIS, it is conceivable that a group of subjects with certain phenomenal states can exist without instantiating an additional subject. For MIS, it is *possible* that a group of subjects with certain phenomenal states can exist without instantiating an additional subject (Goff 2017, 287). This individual conceivability argument seems to, *prima facie*, falsify panpsychism, because it rejects the notion that a mere arrangement of subjects would metaphysically necessitate the production of a further subject. However, as Goff argues, neither CIS nor MIS excludes the possibility that a given group of subjects might enter into a *state of affairs* that would necessitate the existence of a further subject. In fact, it may actually be the case that subjects *always* combine to produce more complex subjects at different existential levels, to which Goff refers as "universalism," in contrast to "nihilism," which is the prevailing opinion by which subjects *never* combine to produce additional subjects (299). As both Mørch and Goff himself clarify, however, the phenomenal bonding "solution" amounts to "mysterianism" about mental combination, because we are left to speculate about precisely what the nature of the hidden relation actually is (2014, 44). For Mørch, in order to be more positively conceivable, this principle would need to be rendered in terms of causality, and as such, she provides the final argument for panpsychism, the argument from causation.

3.3 The Argument from Causation

In addition to the two primary arguments in favor of panpsychism, the argument from the philosophy of mind and the argument from metaphysics and the philosophy of science, there is a third, less prominent argument that merits attention: the argument from causation and the

experience of agency. Although it is a historical argument that was utilized to support panpsychism by proponents such as William James, W. G. Leibniz, and Arthur Schopenhauer, the argument from causation has been relatively neglected by contemporary panpsychism advocates in favor of one or the other arguments listed above. The argument, however, offers strong grounds for accepting a panpsychist metaphysics, and can aid the former arguments by formally integrating an intuitive conception of subjective causation that complements the phenomenal properties presupposed by panpsychism.

With this said, the argument from causation states that we, as unified, subjective wholes -- or macrosubjects -- have an innate sense of agency and causal efficacy as physical actors in the universe. By causal efficacy, I mean that a subject has causal powers that influence the physical world in a direct way. We do not simply experience our own subjectivity as a collection of phenomenal properties, but a constitutive aspect of our subjective experience is our capacity to have a causal bearing on the physical world. In other words, we can effect changes in the physical domain by virtue of our conscious experience. Furthermore, the argument is predicated on the idea that the subjective causal powers and sense of agency which we attribute to our experience, are the *only* properties that we can positively conceive of, not unlike the phenomenal properties that make up conscious experience for macrosubjects more generally. The argument is thus motivated by the same assumption as that of the argument from categorical or intrinsic natures, in the sense that we must look to our intuitive relation to our own causal powers and mental properties as organic beings with subjective experiences to positively conceive of those which may be found at the fundamental physical level. The argument from causation is effective at further rejecting dualism in particular, because of dualism's insurmountable empirical problem, according to which it is difficult to determine just how phenomenal properties which

are ontologically distinct from physical properties can be causally relevant to a causally closed physical world. In response to this problem, the notion of mental or phenomenal causation suggests that physical entities are causally efficacious only insofar as they contain phenomenal properties which instantiate physical structure (and hence, causal structure).

Mørch provides three maxims for the argument which, if found true, would inevitably lead to panpsychism:

> (i) Non-reductionism: All physical things are causally relevant, or have causal efficacy.
> (ii) Mental causation: The only causal powers whose nature we can know, or positively conceive of, are phenomenal in nature, i.e., they are those which constitute part of our categorical nature, or our conscious experience.
> (iii) Non-skeptical realism: Causal efficacy *is* positively conceivable, or knowable; therefore:
> (iv) Panpsychism: All physical things have phenomenal properties. (2019, 8)

According to this perspective, "causal powers" are defined as "intrinsic properties in virtue of which causes produce or bring about their effects, or make them happen, and thereby metaphysically necessitate them" (9). Hume famously objected to the existence of causal powers, arguing that perceived "effects" only *tend to follow* certain "causes" contingently, and not necessarily. This objection is refuted by premise (ii), because we already know that at least *some* physical entities, namely, human beings, have causal powers, and because it is the only positively conceivable account that we have available to us, it follows that causal efficacy could apply to all physical things. This avoids the radical emergence claim that hinders both physicalism and dualism. As mentioned before, the experience of causal powers is evident in mental affects, which includes the experience of desires and motivations that are not present merely as stagnant phenomenal properties, but function as directives which influence our physical behavior, or the very way in which we interact with the (physical) world. Even when such phenomenal properties

do not metaphysically necessitate particular effects -- for example, to use the aforementioned example, electing *not* to use the restroom even when one clearly desires, or may physiologically *need*, to do so -- the experience of will or motive nevertheless affords a stronger sense of causal agency than that of physical causal relations between narrowly physical entities, such as when a rubber ball rebounds after being dropped from a certain height (10). In the first scenario, one is motivated by intrinsic mental properties, whereas in the second, the behavior of the ball is wholly determined by purely extrinsic, physical factors. While in the example provided above the desire to use the restroom may be accounted for in terms of physiology, the reductive explanation tends to lose stability when considering phenomenal states such as vocational aspirations or, as indicated, the agent is free to produce effects which are not fully determinable by narrowly physical descriptions.

An objection to premise (ii) is that causal powers are not necessarily mental or phenomenal, and that they could potentially be understood analogously to ordinary perception, such as when we attribute the phenomenal quality of "sharpness" to a knife, which is not itself a phenomenal property of the knife, but of our experience of it. Mørch's response is that will and motives, unlike the phenomenal properties of other objects, are not mere "mental representations" of physical traits which are not themselves mental. Instead, "will and motivation are mental in and of themselves. Will essentially involves intentionality, which, as noted previously, is widely regarded as a mark of the mental" (12). Again, even if we accept a broad physicalism, by virtue of which phenomenal properties would be considered "physical," for panpsychism, such properties are intrinsic to physical entities, and as such are experienced not as discrete objects with discernable characteristics, but as orientations or attitudes toward objects in the world. Consequently, the experience of causal efficacy issues directly from the physical

unrepresentability of motives and volitions, which are unrepresentable precisely because of their categoricity, which is to say, of their status as the categorical realizers of physical structure, which we intuitively comprehend as mental, or phenomenal. As Mørch makes clear, to abstract from the phenomenality of the causal powers latent in such orientations in this manner leaves us with an indeterminate account of power in general (13), which parallels the problems encountered by non-panpsychist Russelian monism, as discussed earlier. As a result, panpsychism, which does not posit any additional "neutral" properties, is preferable to any perspective which fails to provide a determinate account of such properties.

Regarding microphysical entities such as fundamental ultimates, on this view, their own causal powers would relate to physical dispositions in a way analogous to the way in which our will and motivation relate to our physical behavior (15). If will and motivation are understood as phenomenal properties that inform and direct the way in which we interact physically with the world, then the more basic forms of phenomenal properties belonging to fundamental physical entities would function in much the same way: as aspects of the categorical nature that metaphysically necessitates physical dispositions. Additionally, nonconstitutive panpsychism holds that metaphysically primitive causal powers which emerge at the macrophysical level are fundamental in the same sense as those of ultimate particles, and therefore are not determined by the causal nexus found at the level of the microphysical. This would suggest that there is not just one single, microdeterministic causal framework, but a rich multiplicity of causal networks that operate at different ontological spheres, as Brüntrup and Rosenberg have proposed in their layered model, and as Voigt has in his interpretation of the "inmost" side of the Anthropocene and the resulting hypersubject. As such, there is perhaps a stronger argument to be made in favor of the causal closure of the physical in broad terms, and not merely the microphysical. Moreover,

the argument from causation does appear to require categorical or intrinsic natures not only in order to be theoretically elegant, but also in order to be metaphysically secure. That is, just as the argument from metaphysics and the philosophy of science requires intrinsic natures in order to preserve the physical theory of the empirical sciences, so too does the argument from causation, for "narrow" causality itself is subject to Newman's objection to structural realism. Causality thus necessitates a metaphysical "carrier" in much the same way as physical dispositions do broadly speaking. With this said, given that mentality is intrinsic to subjectivity, and that causal efficacy is irreducible to subjective experience, then it does not seem too controversial to assert that causal powers are fundamentally mental, and belong categorically to the nature of physical entities. Indeed there is much work to be done with respect to mental causation, but for now, there is a definitive argument to be made that explicitly endorses panpsychism.

4 Arguments Against Panpsychism

This section will address two of the primary arguments against contemporary panpsychism, the combination problem and the position known as dispositional essentialism. Although these two problems for panpsychism are not exhaustive of the total number of arguments that attempt to refute panpsychism, they are by far the most salient, and both are taken quite seriously by the vast majority of the current defenders of panpsychism. It is worth noting that some of the content already provided in this thesis is either not affected by either of the two objections, or may even help resolve the complications that either perspective raises. As such, I will be referring back to some of the panpsychist positions with which the reader should already be familiar. My intention is to demonstrate that, despite how the combination problem and dispositionality both threaten to undermine panpsychism in a general sense, they are far from providing a truly comprehensive and definitive rejection of the many ontologies and perspectives that the rich philosophical literature of panpsychism, even so early into its contemporary development, provides. On the other hand, it is precisely because of their legitimate threat to panpsychism that the two objections should be sufficiently addressed.

4.1 The Combination Problem

The combination problem results from how many forms of panpsychism, especially of the constitutive variety, do not take o-consciousness, or the "organismal" consciousness native to human experience, to be among the fundamental facts about the universe. If phenomenal experience at the macrolevel is not taken as fundamental, then panpsychism must account for the manner in which sophisticated macroexperience is intelligibly (or, non-brutely) emergent from

the microexperiences at the fundamental level. By far the most pernicious threat to panpsychism overall, the combination problem asks the question, "How do the experiences of fundamental physical entities such as quarks and photons combine to yield the familiar sort of human conscious experience that we know and love?" (Chalmers 2017b, 179). Put another way, the combination problem states that, given that [my] mind is composed of a composite of microphysical entities, it does not immediately make sense how these microphysical entities can combine to produce the kind of intricate subjective experience that we regard as intrinsically human. As I previously remarked in the introduction to this thesis, to say that there is merely a single combination problem is rather disingenuous; rather, as Chalmers states, there are actually at least three distinct combination problems, each of which is grounded in a particular property attributed to phenomenal experience.[12]

Although there are several proposed solutions to each of the three individual combination problems for panpsychism, it is perhaps more important for panpsychism to 'solve' the combination problem comprehensively, in a way that is demonstrably preferable to physicalism, dualism, and non-panpsychist Russellian monism. In other words, although there may not be completely satisfactory solutions to each of the particular aspects of the combination problem, panpsychism can still be shown to be more theoretically elegant and acceptable than these other ontologies simply by virtue of how it does not run into their (arguably more theoretically fatal) complications, such as the problems of intelligibility for physicalism and the empirical problem of dualism. If panpsychism does not encounter such complications which, as has been made evident throughout the length of this thesis, appear to be non-negotiable when it comes to a

[12] The three different aspects of the combination problem are the *subject* combination problem, the *quality* combination problem, and the *structural* combination problem. The subject combination problem is by far the most prominent of the three, and concerns the manner in which individual microsubjects can combine to yield a macrosubject. For more information on the specific combination problems and their proposed solutions, please see Chalmers 2017b.

genuinely coherent and empirically valid metaphysics, then panpsychism is in a better position to provide an explanatory account of consciousness, despite the combination problem and the threat it poses. With this said, it can be argued that in the event that panpsychism merely replaces the problems faced by physicalism, dualism, and non-panpsychist Russellian monism with different problems, it therefore is not as clearly preferable to any of the other perspectives. But if such problems, specifically the combination problem, are not insoluble to the same degree as those of the other metaphysical positions, then panpsychism nonetheless represents a more viable solution to the mind-body problem in the philosophy of mind (Mørch 2014, 41). Panpsychism, therefore, must prove that the kind of mental combination that it presupposes is not only conceivable in principle, and metaphysically possible by extension, but possible in a way that is inconsistent with the now familiar complications of its alternatives.

What the combination problem does, however, is exemplify that different kinds of panpsychism *do* indeed encounter analogues of the problems of physicalism, dualism, and non-panpsychist Russellian monism. Constitutive panpsychism faces an intelligibility problem, an analogue of the epistemic gap common to all forms of physicalism, but which issues from the explanatory gap between microphenomenal truths (and the microphysical structure it realizes) to macrophenomenal truths, and not just from physical truths to phenomenal truths as in physicalism. Philip Goff's phenomenal bonding principle would provide a solution to this explanatory gap, for it holds that the state of the relations held by the microphenomenal properties of microphysical entities would metaphysically necessitate further subjects, eventually leading to the composition of a macrosubjective whole. Additionally, constitutive panpsychism is also challenged by a version of the special empirical problem for physicalism, the exclusion problem, according to which the concept of *weak* emergence accepted by constitutive

panpsychism seems to deny the causal efficacy of higher-level unities, given that such unities logically supervene on the phenomenal properties of microphysical entities at the fundamental level. While this objection tends to favor nonconstitutive panpsychism, which eliminates the requirement of constitution or grounding for macrophenomenal entities, if what is 'physical' is defined more broadly -- and emergent macrophenomenal properties are defined as broadly, and not narrow, physical -- then one could reasonably argue that the physical, and not just the *microphysical*, is causally closed (Mørch 2014, 203-204).

Nonconstitutive or emergent panpsychism also inherits an intelligibility problem, but one that specifically parallels the vital problem for emergentism in either its physicalist or dualist manifestations: the problem of inexplicable, "brute," or "super-strong" emergence. As such, it will need to be demonstrated that the type of emergence required by nonconstitutive panpsychism, which presupposes the existence of metaphysically primitive causal powers at the macrophysical level, is not strongly analogous to that of emergentism, as Brüntrup has proposed with the notion of *strong* (intra-attribute) emergence. For Brüntrup, nonconstitutive panpsychism only necessitates intra-attribute emergence, on which phenomenal properties already possessed by microphysical particles play a role in the emergence of primitive macrosubjective wholes. Furthermore, nonconstitutive panpsychism is also subject to an empirical problem on par with that of dualism, which is the problem of microphysical or microphenomenal causal closure. On this view, if the microphysical is causally closed, and macrophenomenal properties belong essentially to macrophysical entities (and are not wholly microdetermined as they are in constitutive panpsychism), then macroexperience is either epiphenomenal or systematically overdetermined as it tends to be for dualism (Mørch 2014, 50). William Seager's concept of combinatorial infusion, through which microsubjective individuals are dissolved and fused into a

subsequent macrosubjective unity, may help in resolving such a complication, because the microphysical supervenience base from which macrophenomenal facts logically follow would be supplanted by a primitive causal nexus at the macrophysical level. However, it would need to be demonstrated that the process of mental fusion or combination would not need a physical correlate in order to be more theoretically complete (Mørch 2014, 50-51).

4.2 Dispositional Essentialism

Dispositional essentialism is another view that threatens to undermine panpsychism, particularly the argument from categorical or intrinsic natures. This is because, according to dispositional essentialism, it is possible that certain dispositional properties, such as causal powers, are "essential," or irreducible, and do not need categorical properties to realize or instantiate them (Mørch 2014, 51). As such, dispositional properties, and not phenomenal properties as panpsychism suggests, instantiate most of physical structure. Dispositional essentialism is closely related to another view, called dispositionalism, which states that *all*, and not just some, physical structure must be grounded by such dispositional properties, and therefore constitutes the stronger position. Consequently, assuming that we have already obtained a complete description of the dispositional nature of a given physical entity, for example, all of the roles that an electron plays within the causal structure of the universe, then we have exhausted all that may be said about the essential nature of that thing. That a categorical grounding agent, or a carrier, is not required of dispositional essentialism suggests that panpsychism would be false, because the argument from categorical or intrinsic natures holds that such carriers are needed (namely, in the form of phenomenal properties) in order to instantiate physical dispositions. This concept is otherwise known as the reducibility principle for panpsychism, which states that *all* physical

structure must be instantiated by categorical properties (51). As Mørch remarks, however, dispositional essentialists claim that the arguments against ontological structural realism only defend a weaker version of the reducibility principle, in which case all physical structure must be instantiated by some *non-structural* property, and not necessarily a property that is categorical (52). This is problematic for the panpsychist view, as it claims that the mental properties that it presupposes must necessarily belong categorically to the nature of physical entities, namely as radically intrinsic phenomenal (or mental) properties. However, because dispositions are considered neither structural nor categorical on the dispositional essentialist view, it is not clear that the stronger claim that panpsychism makes in favor of categorical or intrinsic properties is strictly necessary. Rather, if there is something "categorical" belonging to physical dispositions according to the dispositional essentialist position, it is the existence of mathematical spacetime without which dispositions, which are irreducibly relational and not themselves categorical, could exist within the structural framework described by physics.

As mentioned earlier, the "categorical" are the opposite of the "dispositional." For a property to be categorical, therefore, the property would be able to exist independently of the relational structure in which physical dispositions are causally connected. Panpsychism stipulates that the only instance of categorical properties of which we are positively aware is that of phenomenal properties of conscious experience, which are radically intrinsic to physical entities. On the other hand, what is dispositional is dispositional by virtue of its *relational* character, or how it causally interacts with other physical entities in the universe. An example of a dispositional property is a causal power, which "relates" to other physical individuals by producing certain causal effects on other physical things, such as when hydrogen and oxygen atoms causally bind to produce water. However, because causal powers and potencies are

dispositional (and hence relational), they are consequently *not* categorical on the standard view, as they rely on the existence of a physical relational structure, and cannot exist independently of what transpires around them. Insofar as categorical properties and dispositional properties are considered diametrically opposed, it is not evident why one should accept the existence of categorical properties over something simply non-relational, as dispositional essentialism aptly points out. But equally unclear is just why one should so radically oppose categorical and dispositional properties, given that, on which I have already remarked above, phenomenal properties on the panpsychist view have a discernible structure with dispositional or relational characteristics, such as when a subject is "disposed" to avoid displeasurable stimuli (35). Mørch instead indicates that we should conceive of the categorical and the dispositional as one fundamental kind, in which case dispositionalism of any kind seems to necessarily entail panpsychism:

> A better alternative would be to reject the assumption that categorical and dispositional properties are opposite fundamental kinds. Some philosophers (Martin and Heil 1999; Strawson 2008) defend the view that all properties necessarily have both dispositional and categorical aspects, and that categorical and dispositional properties are actually identical. By assuming the identity view, the argument from categorical properties and the argument from causation can be reconciled in a more elegant and plausible way. (2019, 15)

By the "identity view," Mørch means the identification between categorical and dispositional properties, which would entail that dispositional properties, i.e., causal powers, would also be categorical. Dispositionalists reject the first premise of the argument from categorical natures, according to which all physical things require a categorical base, because physical dispositions are understood as irreducible to anything categorical (unless it is something like spacetime or mathematical structure, as mentioned before). But this objection is resolved by the argument

from causation, which holds not only that all physical entities contain causal powers, but that such causal powers *must* be mental (or phenomenal) properties in order to be positively conceivable, lest it encounters some of the problems already mentioned (8). Accordingly, if dispositional essentialism claims that only dispositions are necessary for an intelligible ontology, and such dispositions are regarded as categorical properties of physical entities, then there need not be a fundamental incompatibility between dispositionalism and panpsychism. Furthermore, since dispositional essentialism holds that only physical dispositions exist in the universe, each disposition can and must be traced back to another physical disposition. Without categorical, absolutely intrinsic properties, however, dispositionalism appears to end in an infinite regress, in which case something categorical is needed to metaphysically ground physical structure, which is a familiar complication with many, if not all, physicalist perspectives.

Conclusion

The Soul of the World

In the preceding chapters of this master's thesis, I have argued for the legitimacy and preferability of panpsychism, as it appears to afford the best resolution to the stalemate between physicalism and dualism, while avoiding the problematic philosophical and metaphysical commitments of non-panpsychist Russellian monism. Not only this, but I have also concluded that panpsychism offers tremendous hermeneutical utility for philosophy in broader terms, especially in how it addresses and redefines the ecological crisis and our position "in" it. In chapter one, I began by defining physicalism and dualism, the two primary alternatives to panpsychism, and which are most commonly held by philosophers of mind and philosophers of science. I concluded by suggesting that physicalism faces a fatal intelligibility problem in all of its manifestations by accepting certain premises which are fundamentally unintelligible: by denying our intuitive relationship with consciousness, by positing *a posteriori* necessities or primitive identities, or by accepting the metaphysical possibility of brute emergence. Likewise, dualism faces an equally insuperable empirical problem, in most cases by preserving the causal closure of the microphysical while assuming the ontological distinctness between the physical and the phenomenal domains.

In chapter two, I demonstrated the opportunity panpsychism presents to more efficaciously address the ecological question that still remains unresolved by philosophy and the natural sciences alike. Panpsychism, namely the nonconstitutive, "layered" perspective defended by Godehard Brüntrup Gregg Rosenberg, and Uwe Voigt, permits us to reconceive of ourselves

not only as macrosubjects with sophisticated phenomenal states, but also as the microsubjective instantiators of a higher order of conscious experience, or that of a "hypersubject." The Anthropocene, then, is not simply a geological time period on a timeline, but also something that is felt between all biological organisms and which culminates in a hypersubjective unity at its own order of magnitude. As such, if panpsychism is used to make sense of how be both contribute to and abide in the Anthropocene with our human and nonhuman counterparts, we can then begin to address the problem of ecological collapse from the bottom-up in a way that respects the dignity and autonomy (indeed, the *subjectivity*) of all biological reality, instead of relying on top-down "solutions," such as neoliberalism and aimless technological advancement, to perpetuate our existence on Earth, to the exclusion of all other forms of life.

In chapter three, I offered the three most significant arguments in favor of panpsychism: one from the philosophy of mind, one from metaphysics and the philosophy of science, and one from the nature of causation and the existence of agency. According to these arguments, panpsychism not only avoids the major complications associated with physicalism, dualism, and non-panpsychist Russellian monism, but in a way that encounters and is threatened by much less severe philosophical and empirical problems, thus preserving its theoretical elegance and parsimony in contrast to its alternatives. According to the argument from the philosophy of mind, panpsychism avoids the intelligibility problem of physicalism by not reducing phenomenal properties to, identifying them with, or having them inexplicably emerge from, physical properties or states exhaustively accounted for by physical science. Similarly, panpsychism evades the empirical problem of dualism by not positing additional, unnecessary causal relations that would otherwise violate the causal closure of the physical. Since on the panpsychist view phenomenal properties ground or instantiate physical structure, and are thus logically and

metaphysically antecedent to it, such properties are not systematically overdetermined or epiphenomenal. The argument from metaphysics and the philosophy of science, which is independent of the "hard" problem of consciousness in the philosophy of mind, suggests that consciousness (in the form of phenomenal properties) is necessary as a metaphysical grounding agent, or "carrier," without which physical structure and dispositionality would be wholly arbitrary. The phenomenal properties of physical entities therefore constitute the intrinsic or categorical nature of such entities, and secure their relation to other physical things in the causal nexus. Finally, the argument from causation stipulates that causal powers are *always* mental, and belong categorically as mental properties to all physical entities, whose subjectivity and experience of will, affect, and volition can effect downward causation on physical structure.

In chapter four, I presented the most prominent arguments against panpsychism: the combination problem and dispositional essentialism. The combination problem states that, given that one's mind is made up of an aggregate of smaller "minds" at the microphysical level, how is it that such minds can combine to collectively constitute the rich, complex macrophenomenal experience that defines consciousness for organisms such as us? Although widely considered the most serious threat to panpsychism, panpsychism responds to this objection in a number of ways: mental combination or combinatorial infusion, phenomenal bonding, forms of emergent panpsychism, and arguments in favor of the closure of the physical and *not* strictly the microphysical. Not only this, but panpsychism also offers these responses in a way that does not encounter the theoretical complications of physicalism, dualism, and non-panpsychist Russellian monism. Dispositional essentialism holds that physical dispositional properties, such as causal powers, are irreducible and do not need intrinsic realizers. However, dispositional essentialism may in fact entail panpsychism if what is *intrinsic* is conflated with what is *categorical*, in which

case causal powers (which are understood as *mental* on the panpsychist view) would exist as categorical properties of physical entities.

An ancient characterization of panpsychism was that the whole of the natural world was informed by a "world soul," or *anima mundi*, which was said to animate and provided a psychic dimension to the entirety of the universe. Although, in its contemporary manifestation, panpsychism does not claim that *all* physical things must have phenomenal properties, it *does* claim that the fundamental realizers of physical structure must necessarily exist for such physical things to exist in the first place. Thus, it should not be too controversial to suggest that on the fundamental physical level, all of the physical world is interpenetrated by mentality that gives shape to the physical relationships that are made accessible by the natural sciences. This is especially true when you consider how panpsychism redefines biological reality, in that macrosubjective organisms such as ourselves can serve as the microphenomenal supervenience base for the hypersubject of the Anthropocene. Perhaps this hypersubject can also be called the *anima mundi* of the ancient philosophers, and if so, we can more clearly discern our primordial relation to the cosmos, including to those panpsychists who came before us.

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