



## What are the Ethical Implications of Panpsychism?<sup>1</sup>

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### Abstract

Research Article



People often think that phenomenal consciousness is unique to humans and animals, but panpsychism extends it to other beings, considering consciousness as fundamental and ubiquitous in the natural world. This extension claim, which is shared by all panpsychists, carries ethical implications. Panpsychists vary in their views of the scope of extending consciousness. Micropsychism extends consciousness all the way down to fundamental particles at the micro-level, while macropsychism extends it to the cosmos and all physical objects in the universe. While micropsychism suggests that fundamental particles have moral status and significant moral standing, this truth does not necessarily translate into practical moral consequences, nor does it require us to change our behavior towards them. On the other hand, macropsychism implies that the universe holds moral status and significant moral standing. Advocates of this view argue that we should act in a way that maximizes pleasure and minimizes pain for all beings in which we can discern the causes of pleasure and pain. Additionally, macropsychism requires recognizing the moral status and significant moral standing of all animate and inanimate entities. We should therefore behave in such a way that enhances the pleasure and alleviates the suffering of animals and plants, although we do not have any moral obligation regarding inanimate beings.

### Keywords

Phenomenal consciousness, Panpsychism, Micropsychism, Macropsychism, Cosmopsychism, Animal ethics, Vegetarianism.

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Received: 2024/02/09 ; Received in revised form: 2024/04/12 ; Accepted: 2024/04/25 ; Published online: 2024/04/26

▣ Zakeri, M. (2024). What are the Ethical Implications of Panpsychism? *Journal of Philosophical Theological Research (Mind, Body, and Consciousness special issue)*, 26(1), 85-106.  
<https://doi.org/10.22091/JPTR.2024.10501.3030>

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## Introduction

Consciousness, or conscious experience, is the main phenomenon that eludes a scientific understanding of the world. Despite the progress made in cognitive science, there is still no prospect of finding a solution for the problem of consciousness. The characteristic feature of our conscious experiences is that there is something it is like to have them. While we know that these experiences are correlated with and dependent on neural activity within the brain, they are not the same as these neural processes. Thus, the fundamental question persists: What is the relationship between consciousness and the neural activities of the brain, as well as the broader physical world?

Panpsychism holds that consciousness is a ubiquitous property of the natural world, which is fundamental and irreducible to physical properties, much like other fundamental physical properties such as spacetime and mass. Panpsychism is a metaphysical view with metaphysical implications about consciousness and its relationship to the physical world. Foremost among these implications is the rejection of physicalism, yet they also extend to non-metaphysical aspects, including theological, psychological, and social consequences, including those pertaining to the environment or the meaning of life (see: Goff, 2019b, ch. 5). Ethical implications also arise as instances of these non-metaphysical considerations. This is because panpsychism attributes consciousness to various entities, even fundamental particles. We refrain from inflicting harm on humans for entertainment, whereas we might not attach the same significance to setting fire to wood or paper. The crucial difference here probably lies in consciousness and the ability to experience pain. Should an earthworm possess consciousness, it shares more affinity with a human than with wood or paper, which then necessitates an adjustment in our moral behavior.

Gottlieb and Fischer (forthcoming) have explored the ethical implications of micropsychism, a subset of panpsychism. While I largely concur with their conclusions concerning the ethical implications of micropsychism, I do not find their arguments plausible. I diverge from them regarding the ethical grounds and the way in which they link consciousness to the ethical implications in the case of conscious fundamental entities. Consequently, I present alternative arguments for those conclusions. In addition, they did not address the moral considerations pertaining to macropsychism, another variety of panpsychism. Drawing upon my own ethical grounds and arguments, I delve into the ethical implications of macropsychism, which I think to be of greater importance than those of micropsychism.

## Consciousness and panpsychism

When it comes to mental states, “consciousness” is not used in a single sense. The most notable distinction lies between access consciousness and phenomenal consciousness (Block, 1995). A mental state is access-conscious when its content is accessible to the mind. This accessibility enables the mind to report the contents of mental states, draw inferences from them, or utilize them for rational control of behavior. For example, when I look at a book, I can say “Here is a book”, infer that I left it there yesterday, or pick it up and return it to the library. In this example, my perceptual state is access conscious and my consciousness consists in access to its content. Many cognitive states are conscious in this sense. On the other hand, a mental state is phenomenally conscious when there is something it is like for the subject to have it. For instance, seeing a red book has a distinctive sensation for me, which I call the red color experience. Consequently, the perception of a red book is a phenomenally conscious state. The same holds true of experiences of various pains and pleasures. In general, a phenomenally conscious state is characterized by what it is like for a subject to have that state, whereas an access-conscious state is characterized by the mind’s ability to access its content. Notably, access consciousness can be defined in terms of the functional or causal role it plays within a cognitive system, particularly in terms of its role when accessible to other parts of that system. Therefore, in principle, it is not problematic to provide a physicalistic explanation of access consciousness in terms of the functions performed by the brain or any other physical equivalent. The significant challenge in the scientific explanation of mental states is the phenomenal consciousness that cannot be reduced to physical functions (Chalmers, 2010, pp. 503-504). Henceforth, whenever I mention “consciousness”, I refer to phenomenal consciousness, also known as subjective consciousness, conscious experience, or simply experience.

The answers to the above explanatory problem primarily fall into two broad categories: dualistic and physicalistic explanations. According to dualistic explanations, consciousness is a fundamental non-physical and non-natural property, while physicalistic explanations reduce consciousness to physical properties. However, both of these perspectives encounter challenges. Dualistic views, whether substance dualism or property dualism, deviate from a unified ontology by introducing mental properties or substances over and above the physical realm. In the contemporary period, due to the achievements of physical sciences in explaining diverse phenomena and the predominance of physicalism, dualistic ontology is viewed with suspicion. On the other hand,

by reducing consciousness to the physical, physicalism actually denies our intuitive notion of consciousness, rendering us “zombies” devoid of qualitative sensations.

Panpsychism serves as a middle way in explaining consciousness. Like dualism, it considers consciousness a fundamental property, but unlike dualism, it views it as a natural and ubiquitous phenomenon, rather than a substance or property existing on an immaterial and non-natural level. In this sense, panpsychism presents a coherent and integrated picture of the world that aligns more closely with physicalism than dualism. Furthermore, panpsychism holds an advantage over physicalist views by not construing consciousness as solely physical and functional, rendering it more consistent with our intuitive notion of phenomenal consciousness. The debate over panpsychism has gained more popularity in recent decades as physicalism has failed to provide a successful explanation of consciousness that can accommodate this intuition (see: Goff, 2019a, pp. 99-100; Skrbina, 2009, p. xiv).

It is widely believed that phenomenal consciousness is unique to humans and animals, but panpsychism extends it to other entities. This extension, shared among the majority of panpsychists, carries ethical implications. Various versions of panpsychism are distinguished in terms of the extent to which they broaden the scope of consciousness to encompass other entities. The most common variety of panpsychism is the smallest version or micropsychism, which attributes consciousness to fundamental particles at the micro-level. In this version, panpsychism does not amount to the view that the mind is ubiquitous, or that all objects, such as stones, are conscious. Rather, it suggests that certain fundamental physical entities, such as quarks or photons, are conscious (Chalmers, 2016, p. 19). Greg Rosenberg (2004), Godhard Bruntrup (2016), and William Seager (2016) advocate this version of panpsychism.

In contrast, macropsychism holds that the ubiquitous fundamental consciousness is cosmic consciousness. According to micropsychism, however, since facts about big entities are grounded in those about small ones, human consciousness is dependent on the consciousness of fundamental particles, whereas various versions of macropsychism, particularly cosmopsychism, suggest that since facts about small entities are grounded in those about big ones, human consciousness is dependent on the consciousness of the universe. In micropsychism, human consciousness depends on the consciousness of fundamental particles, while in macropsychism, it depends on the

consciousness of the universe. Mathews (2011; 2020), Shani (2015), Nagasawa and Wager (2016), and Goff (2017; 2020) support this version of panpsychism. Macropsychists suggest that, in addition to cosmic consciousness, all physical objects in the world possess consciousness. Skrbina argues that every physical object, to varying degrees, is a subject (Skrbina, 2020, p. 101). Similarly, Goff believes that everything is conscious, suggesting that all entities, ranging from planets to humans to fundamental particles, are subjects of consciousness, all constituting proper parts of the cosmic subject (Goff, 2019a, p. 108).

It should be noted that fundamental consciousness, whether at the small or big fundamental level, is postulated only to explain human consciousness. This requires that every entity to which we attribute consciousness—be it fundamental particles, the universe, or all physical objects—really possesses some form of consciousness. However, this attribution does not require that they possess a mind with all the mental states and cognitive abilities characteristic of humans, such as thinking. Nor does it require that their consciousness is similar to human consciousness. Therefore, every entity to which we attribute consciousness is a human-like subject with conscious experience, but micropsychism does not require extending thought and agency to fundamental particles, just as macropsychism does not require attributing thought or agency to the universe as a whole. In addition, those who attribute consciousness to all entities do not equate the consciousness of all entities with human consciousness. For instance, the consciousness attributed to a stone, an earthworm, and a human differ in complexity, representing varying degrees of consciousness.

### Relevant ethical issues

One of the key issues regarding the ethical implications of panpsychism is the expansion of the realm of ethics. If mere consciousness is deemed sufficient for moral status and the realm of conscious entities is as wide as panpsychism suggests, then the realm of entities with moral status will also be wide, not only encompassing humans but also numerous non-human beings. Drawing from discussions in animal ethics (e.g., see: Kagan, 2019), we can distinguish three ethical issues concerning conscious beings. First, there is the issue of the moral status attributed to entities considered conscious in terms of panpsychism. Second, there are questions pertaining to the moral standing of beings with moral status: If conscious beings other than humans have moral status, how is their moral status compared to humans? Is their standing at the human level, or is it higher or lower? And third, we should address the

practical implications of expanding the realm of ethics: Does the expansion of the realm of ethics to other beings require a shift in our moral behavior?

### **The moral status of conscious beings**

A being has moral status if and only if it holds moral value for its own sake. Alternatively put, an entity has moral status if there are moral reasons or obligations for us to treat it in a certain way, for its own sake. For example, if there is a moral reason to avoid inflicting pain upon an animal for its own sake, regardless of its consequences for other beings, we can say that the animal holds moral status (Warren, 1997, p. 3).

There are two general views about the moral status of beings. According to utilitarianism, moral status involves a moral obligation to perform an action that maximizes the benefit for an entity or promotes the greatest improvement of its welfare. Accordingly, a being holds moral status if it is possible for it to improve its welfare, that is, if it is a subject of welfare, where welfare can encompass a variety of goods such as pleasure, knowledge, or power. In contrast, deontological ethics does not tether moral status to the welfare of beings but rather to their moral agency, where moral agency can be characterized in diverse ways, such as autonomy, as advocated by Kant (Kant & Wood, 2018, p. 63 [446]), rationality, or complex cognitive abilities, or other relevant criteria. Due to space constraints, this article cannot delve into the details and debates surrounding these contrasting perspectives on moral status (for a comprehensive discussion, see: Kagan, 2019, pp. 10-36). According to deontological ethics, the panpsychist expansion of the scope of consciousness does not require an expansion of the ethical realm. This is because the two varieties of panpsychism under discussion only pertain to phenomenal consciousness, which does not require moral agency. For instance, extending consciousness to fundamental particles does not necessitate that these particles are moral agents. Indeed, panpsychists themselves have not made such a claim regarding fundamental particles. Therefore, deontological ethics does not require that these particles are moral agents and thus have moral status. However, from a utilitarian standpoint, it could be argued that conscious beings are subjects of welfare and consequently hold moral status. In the remainder of the article, I will primarily discuss the ethical implications of panpsychism through the lens of utilitarianism.

### **Micropsychism and the moral status of conscious beings**

As we have seen, utilitarianism implies that subjects of welfare hold moral



status. Furthermore, micropsychism holds that fundamental particles possess consciousness. If consciousness is considered sufficient for experiencing welfare or lack thereof, then it follows that fundamental particles have moral status. The sufficiency of consciousness for experiencing welfare and having moral status is a hypothesis called “broad sentientism” by Roelofs (2023, p. 302), following Chalmers. The hypothesis has been advocated by Siewert (1998, pp. 333-335; 2021, p. 34), Lin (2021), Shepherd (2018), and Chalmers (2022, pp. 342-346).

However, it seems that conscious experience alone may not be sufficient for qualifying as a welfare subject. According to utilitarianism, an entity’s welfare depends on the possibility of its improvement with respect to the items on the inventory of welfare goods. Gottlieb and Fischer (forthcoming, p. 8) have raised the possibility that fundamental particles could acquire knowledge, which would constitute a benefit improving their welfare. This possibility is grounded in an argument put forward by Bertrand Russell and more recently by Duncan (2021) to the effect that conscious experience constitutes a form of knowledge. Thus, it can be argued that fundamental particles qualify as welfare subjects because they have the capacity to attain one of the welfare goods. Fundamental particles can achieve welfare by virtue of having conscious experiences, which constitute a form of knowledge.

That being said, this possibility may be called into question. The form of knowledge typically associated with welfare goods is propositional knowledge. As I mentioned earlier, while panpsychism attributes consciousness to fundamental particles to explain the higher-level consciousness in humans, for purposes of this explanation, it is not required to ascribe cognitive states—such as belief and doxastic propositional knowledge—to fundamental particles. While conscious experience in humans often yields propositional knowledge, this may not hold true for fundamental particles. Moreover, mere conscious experience and non-conceptual acquaintance cannot be regarded as welfare goods.

The experience that is definitely recognized as a welfare good—and thus conferring moral status upon the entity possessing it—is the experience of pleasure and pain. According to the theory of narrow sentientism (Roelofs, 2023, p. 304), only entities capable of experiencing pleasure and pain, or more broadly, those with valenced mental states, qualify as welfare subjects. Singer (2002, p. 171) and Sebo (2018, p. 52) have defended this view. This raises the question: Can fundamental particles feel pleasure and pain? There is no direct way to answer this question. Nagel (1974) famously argued that humans

are incapable of understanding what it is like to be a bat. Presumably, the experiential gap between bats and humans is smaller than the one between fundamental particles and humans. Bats possess sensory perception through echolocation, yet in no way can we claim that fundamental particles have sensory perception. Therefore, we cannot directly ascertain whether fundamental particles feel pleasure and pain.

There is, however, an indirect way to answer this question (Gottlieb, & Fischer, forthcoming, p. 10). According to panpsychism, consciousness at the micro-level (fundamental particles) is supposed to account for consciousness at the macro-level. To play this explanatory role, it must satisfy certain conditions (see: Lewtas, 2013), with the most pivotal being the absence of any explanatory gap. Thus, in describing experiences at the micro-level, we cannot deviate too far from those at the macro-level. While some conscious experiences may be exclusive to beings of certain levels of complexity—such as those with brains—the experiences of fundamental particles must not diverge excessively from those of humans. Rather, they must possess rudimentary forms of pleasure and pain to explain the higher-level human experiences involving sensations of pleasure and pain. Consider a case where Farhad endures an accident resulting in a broken arm—an experience typically associated with a highly painful experience. Although we may not exactly know what kind of experience at the micro-level is compatible with this macro-level experience, we do know that it must be of a type of experience from which the existence of the macro-level experience can be inferred *a priori*, perhaps in conjunction with certain additional structural-functional facts. That being so, micropsychism and narrow sentientism can be said to imply that fundamental particles are welfare subjects and thus possess moral status.

### **Macropsychism and the moral status of conscious beings**

Macropsychists maintain that cosmic consciousness is fundamental consciousness, which is related to the universe just as the human mind is related to the human body. On this account, every physical change within the universe corresponds to a change in cosmic consciousness, which serves as the bedrock of consciousness in the universe. Skrbina (2020, p. 104) believes that this consciousness lacks any functions in the universe since, as the mind of the universe, it neither exerts any causal impact upon it nor is affected by the universe. In contrast, Goff (2019a) espouses agentive cosmopsychism, asserting that the *a priori* probability of life in our universe is extremely low,



as it would require an explanation. Goff contends that cosmic consciousness serves as a factor explaining the existence of life. He attributes two primary characteristics to agentive consciousness. Firstly, it possesses knowledge of reasons and acts accordingly, just like human agents. Secondly, it has mental states as well as the ability to represent the future, enabling it to predict the probability of life by establishing precise laws.

So, does cosmic consciousness confer moral status upon the universe? Macropsychism assigns moral status to the universe for the same reason that underlies micropsychism's attribution of moral status to fundamental particles: Cosmic consciousness serves as the constitutive and explanatory foundation for consciousness in entities within the world. Therefore, to explain human experiences of pleasure and pain, cosmic consciousness must share fundamental similarities with them. Consequently, it possesses the experiences of pleasure and pain, or at the very least, experiences akin to them. It follows that it holds moral status.

Proponents of macropsychism hold that, in addition to cosmic consciousness, all physical objects in the world have consciousness. Attributing consciousness to these objects requires assigning moral status to them. This is because if we conceive the consciousness of beings in the world as a hierarchy—beginning with human consciousness and descending, respectively, to animals, plants, and eventually the simplest beings—then the distance between the consciousness of physical objects and human consciousness is narrower than its distance from fundamental particles. Just as acknowledging the consciousness of fundamental particles necessitates their moral status, the same holds true of the physical objects of the world. Therefore, according to macropsychism and utilitarianism, the universe and all physical objects within the world possess moral status. However, within the framework of Goff's agentive macropsychism and deontological ethics, the question arises: does the cosmos hold moral status?

As we have seen, deontological ethics assigns moral status only to moral agents. What is more, Goff argues that the universe is an agent. If the universe meets the criterion of moral agency, then it may have moral status just humans do. In explaining the emergence of life, Goff asserts that all occurrences are determined by rational choices made by the universe as if it has been crafted by a rational agent (Goff, 2019a, pp. 109-110). Goff's assertion implies that agentic cosmopsychism, even within the framework of deontological ethics, requires the attribution of moral status to the cosmos.

## The moral standing of conscious beings

There are two competing perspectives on the moral standing of beings: unitarianism and hierarchicalism. Unitarianism, championed by Peter Singer (1993) and more recently by Degrazia (2007), holds that all animal species hold equal moral status, rejecting the idea that membership in the human species justifies the attribution of a superior moral status to humans. Singer contends that the moral preference of humans over other animals is a form of speciesism. One problem with speciesism is that, adopting an instrumental view of animals, it restricts the right to life to the human species, whereas similar entities have similar rights in relevant aspects. Akin to racism and sexism, speciesism assigns a superior status to a certain species without any valid reason (Singer, 2002, pp. 3-4). According to unitarianism, if a human and a sheep both undergo a pain that produces the same welfare effects, their respective desires for pain relief should be accorded equal weight. The crucial factor is the extent of their welfare, regardless of the species to which they belong.

Nevertheless, we have an intuition that humans possess a higher moral standing compared to other creatures. To elucidate this intuition, consider a scenario where a human and a mouse are drowning, and you can only rescue one. Our moral intuition dictates prioritizing and saving the human. In contrast, if faced with two unknown humans in a similar predicament, we would have no reason to favor one over the other.

To accommodate this intuition, unitarianism offers an explanation for human privilege. Rather than appealing to differences in moral standing, it suggests disparities in the capacity for welfare. Welfare capacity is the total amount of welfare that an individual can achieve. Two factors determine the capacity for welfare: the intensity or degree of welfare that an individual can attain at any given time, and the length of the individual's life. Considering the difference in both the degree of welfare and the lifespan of humans and mice, it follows that, in general, the welfare capacity of humans outweighs that of mice. Thus, although the moral standing of humans and mice may be equivalent, in effect, humans are prioritized over mice to maximize welfare (See: Kagan, 2019, pp. 42-43).

Conversely, hierarchicalism assigns distinct moral standings to entities based on their species. Thus, a human's moral standing is higher than that of a sheep. From a hierarchical viewpoint, each unit of human welfare matters more than each unit of sheep welfare—for instance, by being four times greater (Kagan, 2019, pp. 108). This view accommodates the above intuition

by accepting different levels of beings in their moral status. However, it needs to provide a criterion to determine the respective moral standing of each creature.

Kagan proposes psychological capacities as a criterion for determining the moral standing of beings. Pivotal to this are the psychological capacities that enable the particular kind and level of an individual's agency. Humans hold a high moral standing due to the peculiar kind of agency, which allows them to pursue a wide range of aims, self-consciously evaluate the reasons for and against various courses of actions aligning with those reasons, and exercise self-restraint by overriding certain initial desires when recognizing relevant compelling reasons. Kagan argues that even if these capacities turn out to play a role in enabling a particular kind of welfare, these capacities enhance human standing primarily by virtue of the role they play in constituting the particular kind of human agency, rather than enabling a particular kind of welfare (Kagan, 2019, pp. 123-125).

Kagan presents a list of mental capacities that afford humans a high moral standing, and animals acquire moral standing to the extent that they share these capacities: the capacity for abstract and complex thinking and emotion; the capacity for creativity and imagination; the capacity for contemplating the future and the distant past; the capacity to devise and execute intricate long-term plans, often involving highly sophisticated, skilled, and non-instinctive actions; the capacity for self-awareness and self-consciousness; and the capacity for self-governance and the ability to make autonomous choices. Kagan admits that a more systematic explanation is required to elucidate the role of these capacities in determining moral standing (Kagan, 2019, pp. 125-128).

By presupposing the higher moral standing of human beings, Kagan argues that the aforementioned psychological capacities are the determining criterion for this standing. He draws upon these capacities to judge the moral standing of other beings, particularly animals. Other philosophers have offered similar explanations of the foundations of moral standing (as cited in Shepherd, 2021, p. 57): “self-consciousness” (Tooley, 1972), “sophisticated psychological capacities” (McMahan, 2002), “typical human capacities” (DiSilvestro, 2010), capacity for participation in a “person-rearing relationship” (Jaworska & Tennenbaum, 2014), and “intentional agency” (Sebo, 2017).

In contrast, Shepherd believes that there is a more effective approach to specifying the criterion for determining the moral standing of beings endowed with moral status. This approach involves identifying what is valuable in mental life and using it as the basis for determining the moral standing of

beings (Shepherd, 2021, p. 58). It seems that what Shepherd proposes is the “more systematic explanation” sought by Kagan, who maintained that the basis for determining the moral standing of beings lies not in their physical capacities but in their psychological capacities, particularly those related to agency. Shepherd’s explanation offers insights into the ground of the value of mental capacities and indeed mental life.

Shepherd claims that it is a widely shared intuition that phenomenal consciousness is central to the value of mental life. Without phenomenal consciousness, experiences such as being awake, being alive, and being a subject would be indiscernible from states such as being in a coma, being dead, or lacking subjectivity altogether. But what makes consciousness non-derivatively valuable? According to Shepherd, “It is necessary and sufficient for the presence of some (non-derivative) value in a conscious experience that the experience has evaluative phenomenal properties that essentially contain affective phenomenal properties” (Shepherd 2018, p. 31). Affective phenomenal properties such as the painfulness of pain, the pleasantness of pleasure, the warmth of love, share a common characteristic—they possess some form of valence. In contrast, experiences like seeing a vague light, which do not evoke any emotions, are neutral and non-evaluative. While a non-emotional property alone has no value, when coupled with an emotional property, it can enrich the experience and thus contribute to its value. In general, there is at least a rough correspondence between the richness of phenomenal experience and its capacity to have value (Shepherd, 2021, pp. 62-63). This view is fully compatible with the theory of narrow sentientism regarding the moral status of beings. According to narrow sentientism (Browning, 2023, p. 531; Roelofs 2023, p. 304), moral status is solely assigned to beings with emotional phenomenal consciousness. It is entirely consistent with this theory to assert that the greater a being’s capacity for emotional phenomenal consciousness, the higher its moral standing will be.

### **Micropsychism and the moral standing of conscious beings**

Unitarianism implies that measuring the welfare levels of humans and fundamental particles fails to establish the moral superiority of humans over fundamental particles, as these particles possess significant welfare capacity. As impoverished as the experiential lives of fundamental particles might be, they exist throughout the life of the universe, with each particle’s life surpassing the lifespan of any human individual.

According to hierarchicalism, what determines the moral standing of beings

is the richness of their phenomenal experience, which can add value to mental life when accompanied by emotional experiences. As previously noted, micropsychism attributes experiences to fundamental particles to explain the phenomenal experiences of humans. Thus, fundamental particles do not possess experiences with the same degree of richness as human experiences. Experience at the micro-level should not surpass the complexity required to explain experiences at the macro-level (Lewtas, 2013, p. 46). While it is necessary to attribute emotional experiences to fundamental particulars to explain human emotional experiences, it is not necessary to attribute the same level of phenomenal richness to these particles. On this account, the phenomenal richness of fundamental particles is insignificant relative to that of humans, resulting in their lower moral standing.

We can arrive at this conclusion through another route. A being's capacity for emotional experiences is proportional to its perceptual, cognitive, and agentive capacities. The greater these capacities, the richer its emotional experiences will be (Shepherd, 2021, p. 81). The level of these capacities in humans far exceeds that of fundamental particles, as panpsychists have no reason to attribute these capacities to fundamental particles. What is essential for explaining human conscious experience is merely the presence of conscious experience in fundamental particles, rather than other human psychological capacities. Consequently, the capacity of fundamental particles for emotional experiences is inferior to that of humans. As a result, their moral standing is lower than that of humans.

### **Macropsychism and the moral standing of conscious beings**

According to the hierarchical account of the moral standing of beings, the same arguments raised concerning the experiences of fundamental particles suggest that cosmic consciousness possesses less phenomenal richness and impoverished emotional experiences, thus resulting in a lower moral standing compared to humans. We can attribute to cosmic consciousness only the experiences that are necessary for explaining human experiences. Accordingly, cosmic consciousness possesses an impoverished form of emotional experiences and hence a lower moral standing relative to humans. However, there is a caveat to this general judgment: Goff attributes agency to cosmic consciousness to account for the emergence of life in the universe. Therefore, unlike fundamental particles, the universe possesses certain psychological capacities of humans; namely, those essential to agency. In this case, the level of emotional experiences of the universe must be close, but ultimately remains

inferior, to that of humans. This is because cosmic consciousness still lacks other phenomenal experiences and additional psychological capacities of humans. Since the emotional experiences of a being are proportional to its phenomenal richness and the sum of its psychological capacities, the universe has a more impoverished form of emotional experiences and a lower moral standing.

On the other hand, if we aim to gauge the moral standing of the universe in terms of welfare capacity, which serves as the criterion for determining the moral standing within the framework of unitarianism, the welfare capacity of cosmic consciousness, akin to that of fundamental particles, far surpasses that of humans. This is because the single consciousness of the cosmos encompasses the aggregate welfare of all humans and other conscious beings. In this case, the moral standing of the universe exceeds that of humans.

Regarding other beings that possess consciousness according to macropsychism, such as animals and inanimate objects, we have an intuition that humans hold a higher moral standing, which is readily explainable. The hierarchical view suggests that animals and inanimate objects possess an impoverished form of emotional experiences, thus resulting in a lower moral standing compared to humans. The same holds true within a unitarian framework as well. These creatures typically experience lower welfare intensity than humans, and they often have shorter lifespans.

However, both views acknowledge the significant moral standing of these beings. This is clearly consistent with our moral intuition regarding animals. On the one hand, there is no considerable difference between humans and animals in terms of their respective levels of emotional experiences and their welfare capacities. On the other hand, our moral intuition indicates that animals have a significant moral standing and their moral status cannot be disregarded. While conscious experience diminishes gradually in plants and inanimate objects, it does not vanish altogether. Hence, it could be argued that their moral standing is lower, but not negligible.

### **Practical implications**

Given the arguments we have presented regarding the moral status and standing of creatures, do they carry practical implications and do they morally require a shift in human conduct? Thus far, we have established that conscious entities have moral status and their moral standing is significant. With this in mind, does respecting them and their moral standing demand a modification in our actions? In theory, as the definition of moral status suggests, recognition of



a being's moral status implies that we should treat it in a certain way, but in practice, is this requirement applicable to entities that possess consciousness within the framework of panpsychism? We will delve into these questions in the following subsections.

### **Practical implications of micropsychism**

In practice, the moral status and standing of fundamental particles will require a distinctive treatment towards them in light of their welfare if human actions have an effect on them. As a matter of fact, humans can affect fundamental particles, as every human action involves altering the trajectory of countless particles. Nevertheless, our ability to influence their trajectory does not mean affecting their welfare. While human actions may have consequences for their welfare, the primary challenge in determining our moral obligations toward fundamental particles lies in our lack of understanding about what enhances or diminishes their welfare. This problem can be formulated in two ways. The first pertains to value theory. The trouble is that we do not know what constitutes good or bad for fundamental particles, a question that cannot be answered at the level of axiology (see: DeGrazia, 1996, p. 211).

This problem can be readily addressed. Fundamental goods are good for every welfare subject, even if, for various reasons, they are not available to the subject. For example, consider knowledge as an example of a welfare good. While fundamental particles lack access to knowledge, acquiring it will enhance their welfare. Succinctly put, our theory of welfare tells us what is ultimately good or bad for all welfare subjects, whether humans, eagles, or fundamental particles. Regardless of the fact that some can and some cannot access these instances of good and bad, good things are good and bad things are bad (Gottlieb, & Fischer, forthcoming, pp. 21-22).

The crucial problem with fundamental particles is that even when our actions affect their welfare, we cannot tell whether they enhance or diminish their welfare. In the case of many animals, not only do we have a general understanding of what is good or bad, we can also have a partial comprehension of the behaviors that contribute to or reduce their welfare. For example, we know that certain behaviors, such as mutilation or confinement, inflict pain and diminish the welfare of animals. However, we cannot discern any signs in the behavior of fundamental particles that enable us to differentiate between actions that cause pain in them and those that provide pleasure.

Under normal circumstances, the act of killing humans and animals is

deemed detrimental to their welfare and contrary to their moral status. But what about fundamental particles? Take, for instance, the pair annihilation process, where an electron collides with a positron in the accelerator, resulting in the creation of two photons. As previously noted, we cannot discern whether this process causes pain or pleasure to the electron. However, if we construe this behavior as causing the “death” of electrons, can we view it as diminishing the welfare of fundamental particles and conflicting with their moral status? If we acknowledge that the goodness or badness of an entity’s death is contingent upon the future experiences it would have had if it had survived, then we might argue that the pair annihilation process is either good or bad for an electron depending on whether it prevents negative or positive experiences it would otherwise have. Yet, since we lack insight into whether the electrons were in a good or bad state prior to their “death”, we remain uncertain whether the pair annihilation process rescues electrons from a bad life or robs them of a good one. This means that we cannot determine whether death will amplify or reduce their welfare (Gottlieb, & Fischer, forthcoming, pp. 20-21). Consequently, destroying fundamental particles cannot be considered a moral action toward them.

### **Practical implications of macropsychism**

Cosmic consciousness is the collective instance of consciousness in all entities. Thus, cosmic pleasure and pain amplify with the increase of those beings’ pleasures and pains. And we can enhance and diminish its pleasure and pain by respectively augmenting and mitigating the pleasure and pain of humans, animals, plants, and physical objects in the world. Thus, acknowledging the moral status of the universe, regardless of whether it surpasses or falls short of human moral status, implies that we should act in a manner that maximizes enjoyment and minimizes suffering among creatures in this world.

We have seen that the consciousness of non-human entities in the world implies that they have moral status and significant moral standing. This standing requires treating them in a manner that maximizes their pleasure and minimizes their suffering. This is possible in the case of animals to a certain extent, although it is not feasible regarding fundamental particles. At present, our knowledge of what constitutes good or bad for animals remains incomplete. While we may not ascertain whether bringing a non-domestic animal into our environment and providing it with sustenance and healthcare enhances its welfare or deprives it of freedom and the ability to flourish

according to its inherent capabilities, we do possess some knowledge about what is good or bad for them. We may not know what it is like to be a bat, but we do have some understanding of its interests: we recognize that it suffers if we mutilate its wings and that it enjoys when provided with proper environment and nutrition. The issue of killing animals for consumption is also important. Certainly, killing animals inflicts significant suffering upon them, infringing their moral status and significant moral standing.

Given the current state of the science of consciousness, surrounded by uncertainty, Birch advocates for the precautionary principle. He argues that, given the state of science in this domain, practical decisions regarding the use and treatment of beings that may possess consciousness are accompanied by uncertainty. Accordingly, “we should not require absolute certainty that a species is sentient before affording it a degree of legal protection. Absolute certainty will never be attained [...] and its absence is not a good reason to deny basic legal protections to potentially sentient animals” (Birch, 2017, p. 2). However, if macropsychism is true, it follows that animals have consciousness and feelings. In this case, beyond exercising caution, it becomes imperative to adopt supportive decisions and policies.

Regarding plants, albeit to a lesser extent than animals, we can infer from their reactions whether our actions cause them pain or pleasure. For instance, when we cut tree branches without intending to prune or fell the tree, we induce suffering in it. Thus, by predicting the effects of our actions on plants, we have moral reasons to adjust our behavior in accordance with their interests.

Regardless of the arguments presented in favor of panpsychism, Goff contends that there is mounting evidence indicating that plants possess intricate mental lives. He cites several studies to support this claim. For instance, some studies have shown that pea plants can be subject to conditional learning. When “hearing” a certain sound coming from a certain direction, these plants grow towards that direction to receive the light that serves as their nourishment. Moreover, other studies have demonstrated that plants can engage in complex forms of communication with each other and mutually protect each other from dehydration risks. Goff concludes that plants have the ability to communicate, learn, and remember. He sees no compelling reason, aside from anthropic prejudice, to deny them a conscious life. Moreover, he argues that attributing a conscious life to plants presents various ethical challenges for vegetarianism and veganism (Goff, 2019b, p. 215). If raising animals for slaughter and consumption contravenes their moral status and

significant moral standing, then the same holds true for plants. This is particularly relevant for vegetables, as their components are harvested while they are alive. However, when it comes to ripe fruits and plant seeds, we may admit that they lack organic life and are closer to inanimate objects.

As we move further from humans in the spectrum of conscious beings, their condition begins to resemble that of fundamental particles, making it increasingly difficult to discern their experiences of pleasure and pain. Drawing upon similar arguments presented in the case of fundamental particles, we can infer that it is arduous to determine the pleasurable or painful sensations of a piece of wood or stone. Consequently, attribution of consciousness to them does not require distinctive treatments.

As we have observed, according to unitarianism, the moral standing of the universe surpasses that of humans. This implies that if, in practice, a conflict arises between respecting the moral status of the universe and that of humans, then morally speaking, we must prioritize the universe. Conversely, the hierarchical view suggests that the moral standing of humans takes precedence over that of the universe. Accordingly, in a practical scenario where there is a conflict between respecting the moral status of humans and that of the universe, we should give priority to humans. When comparing humans to other creatures except the universe, both unitarianism and the hierarchical view attribute a higher moral standing to humans. Therefore, in cases of conflict, humans should be preferred.

Before concluding the article, it is necessary to mention another version of panpsychism known as panprotopsychism. This view holds that fundamental particles possess properties that, while not individually conscious, collectively give rise to consciousness. These are called protophenomenal properties (Chalmers, 2015). Panqualityists believe that protophenomenal properties are unexperienced qualities that are only contingently experienced. These properties exist unexperienced in basic matter (Coleman, 2016). Given my arguments above, it is evident that since panprotopsychism does not extend consciousness to entities beyond humans and animals, it lacks any moral implications.

## **Conclusion**

The conjunction of micropsychism and utilitarianism implies that fundamental particles are welfare subjects, holding moral status. Given a unitarian account of the moral standing of beings, they possess a higher moral standing than humans. However, if we embrace the hierarchical view, although they have

a significant moral standing, it is lower than that of humans. Similarly, macropsychism yields an analogous conclusion regarding the moral status and moral standing of the universe. Yet, these views do not have the same practical implications. Since we cannot discern what enhances or diminishes the welfare of fundamental particles, their moral status and standing have no practical consequences for us and do not require a shift in our behavior. Conversely, the moral status and significant moral standing of the universe imply that we modify our behavior for its welfare. Consequently, we should act in a way that enhances pleasure and diminishes pain for all beings whose sources of pleasure and pain are known to us. Moreover, macropsychism implies that all animate and inanimate beings hold moral status and significant moral standing. Thus, we must strive to enhance the pleasure and alleviate the pains of animals and plants, although we are not morally obligated concerning inanimate beings.

The moral standing of humans compared to that of the universe and other beings implies that in practical scenarios where a conflict arises between the moral status of the universe and that of humans, according to unitarianism, moral priority must be accorded to the universe. However, according to the hierarchical view, humans should be prioritized. In the comparison between humans and other creatures except the universe, both unitarianism and the hierarchical view imply the preference of humans.

### **Conflict of Interests**

The author has no competing interests.

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