

# On the Paradigmatic Conception of the Physical

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**Abstract.** What “physical” means is sometimes clarified by appealing to paradigmatically physical objects, properties, or phenomena. This move is not entirely unmotivated. The most basic intuition behind physicalism can be identified as that we, as conscious beings, are not ontologically special: we are, ultimately, like all these inanimate and unconscious things; we do not exemplify any mysterious properties that are categorically over and above all the properties that are exemplified by ordinary things like chairs or rocks or their constituents. And, according to the dualists, we are, in terms of substance or property, metaphysically different from chairs, rocks, and the like. The kind of conception of the physical that refers to paradigm cases of the physical is in line with this disagreement in intuition between the physicalist and the dualist. Trying to conceptualize the physical based on some paradigmatically physical objects or phenomena, I argue, however, is a dead-end.

**Keywords:** physicality, physicalism

## Apie paradigmą fiziškumo sampratą

**Santrauka.** „Fiziškumo“ reikšmė kartais aiškinama apeliuojant į paradigminius fizinius objektus, savybes arba fenomenus. Tai nėra visiškai nepagrįsta. Pamatinė fizikalizmo intuicija gali būti tapatinama su mintimi, kad mes, sąmoningos būtybės, ontologiniu požiūriu nesame išskirtinės: iš esmės mes esame panašūs į visus tuos negyvus ir nesąmoningus daiktus; mes neturime jokių paslaptinių savybių, kurios būtų viršesnės lyginant su savybėmis, būdingomis įprastiems daiktams, tokiems kaip kėdės, uolos ar jų dalys. O pagal dualistus, medžiagiškumo ar savybių požiūriu, esama metafizinio skirtumo tarp mūsų ir kėdžių, uolų bei panašių objektų. Fiziškumo samprata, besiremianti paradigmatais fizinių objektų pavyzdžiais, sutelpta į tą intuityvų nesutarimą tarp fizikalistų ir dualistų. Aš teigiu, kad bandymas konceptualizuoti fiziškumą nurodant į paradigminius fizinius objektus ar fenomenus niekur neveda.

**Pagrindiniai žodžiai:** fiziškumas, fizikalizmas

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## Introduction

Traditionally, philosophers either focus on phenomenality or intentionality in order to demarcate the mental. But, whether phenomenal or intentional, when we try to define the mental, we know what it is that we are talking about. We know this through introspection, by attending to our own conscious mental states. We are very familiar with the mental. Even before deciding whether it is essentially phenomenal or intentional, we can just introspectively point at a conscious state, so to speak, like a tooth-ache, and ask “are states like *this* over and above the physical?”

When it comes to the physical, can we do the same thing and just point at a physical state and ask “are mental states over and above states like *that*?” Can we understand the physicalism question this way? Some philosophers are indeed happy with a sophisticated version of just pointing at something that is paradigmatically physical and conceptualizing the physical based on some examples of the physical. And, this conception of the physical, I think, is not entirely unmotivated. The most basic intuition behind physicalism can be identified as that we, as conscious beings, are not ontologically special: we are, ultimately, like all these inanimate and unconscious things such as chairs and rocks; we do not exemplify any properties that are categorically over and above all the properties that are exemplified by ordinary things like chairs or rocks or their constituents. *This*, the inside, the mental, is like *that*, the outside, the physical. And, according to the dualists, we are, in terms of substance or property, metaphysically different from chairs, rocks, and the like. The kind of conception of the physical that refers to paradigm cases of the physical, which I call “the paradigmatic conception of the physical” is in line with this disagreement in intuition between the physicalist and the dualist. Trying to conceptualize the physical based on some paradigmatically physical objects or phenomena, I argue, however, is a dead-end.

## The Paradigmatically Physical

A conception of the physical is a paradigmatic conception if and only if the physical is conceptualized by appealing to some relation (resemblance, constitution, explaining, etc.) to some uncontroversially physical phenomena (objects, states, properties, etc.).

Let’s see some examples from the literature. Stoljar’s (2001) object-based conception of the physical is a paradigmatic conception. He writes:

According to [this] conception of the physical -which I will call the object-based conception- a physical property is a property which either is the sort of property required by a complete account of the intrinsic nature of paradigmatic physical objects and their constituents or else is a property which metaphysically (or logically) supervenes on the sort of property required by a complete account of the intrinsic nature of paradigmatic physical objects and their constituents. (Stoljar 2001: 257)

But, what are those paradigmatic physical objects? Stoljar continues:

According to this conception, for example, if rocks, trees, planets and so on are paradigmatic physical objects, then the property of being a rock, tree, or planet is a physical property. Similarly, if the property of having mass is required in a complete account of the intrinsic nature of physical objects and their constituents, then having mass is a physical property. (2001: 257)

Jackson (2000) proposes another paradigmatic conception of physicality:

Physicalists can give an ostensive definition of what they mean by physical properties and relations by pointing to some exemplars of non-sentient objects—tables, trees, mountains, and the like—and then say that by physical properties and relations, they mean the kinds of properties and relations needed to give a complete account of things like them. (2001: 7)

Similarly, Snowdon (1989) writes:

... we can explain being physical as being the way (whatever it is) that all these objects (for example tables and trees) fundamentally are, given that they are objects with the capacity for existence independent of perception and are in space (and so on). (Snowdon 1989: 153)

For Stoljar (2001), some of the paradigm physical objects are *rocks*, *trees* and *planets*, for Jackson (2000) and Snowdon (1989), *tables* and *trees*, and for Jackson (2000), *mountains*<sup>1</sup>. However, Göcke (2009, cf. Daly 1998) objects that these proposals of paradigmatic physical objects are arbitrary without a prior specification of physicality<sup>2</sup>. He writes:

... mountains could as well be classified as paradigmatic geological objects known as orogen, and although geology has much in common with physics, it is a different science. To pick just some object found in one's environment as a paradigmatic physical object is arbitrary in a way not tenable for an account which is yet supposed to provide an account of physical properties. (Göcke 2009: 297-8)

I think there is a problem with Göcke's objection. He takes physicality as mutually exclusive with other scientific kind properties such as chemical, biological, geological, etc., but this distinction does not track the disagreement between the physicalists and the dualists. If the mental is nothing but biological, say, if pain is nothing but c-fiber activation, then I take it that physicalism about pain is true (regardless of whether the biological is reducible to something more fundamental or not). Furthermore, there is no reason why something cannot be a paradigmatic object for the subject matter of a science other than physics but also a paradigmatic object for the paradigmatic conception of the physical.

<sup>1</sup> There are some other conceptions of physicality proposed in the literature, in the vicinity of the paradigmatic conception. Papineau (1993), for example, defends a conception of the physical based on physics and tries to clarify the subject matter of physics in a way that is very similar to the paradigmatic conception. He writes: "I propose that we simply postulate some pre-theoretically given class of paradigmatic physical effects, such as stones falling, the matter in our arms moving, and so on. If we take this class to be independently given, then we can effectively characterize the rest of physics as all the categories that need to be brought in to explain those paradigmatic physical effects." (Papineau 1993: 30).

For another example, Daly (1998: 200-2) argues against a conception of the physical where some paradigmatically physical properties are introduced and the properties that have family resemblance to those properties are regarded as physical. However, Daly does not cite anyone who actually holds this view.

<sup>2</sup> For a similar objection see Daly (1998: 208.)

Then, given that physics is the science that is concerned with the physical, physics would be the science that is concerned with the (minimum set of) properties that are included in the complete account of trees, rocks, mountains, planets, so on. Trees are biological, rocks and mountains are geological, and planets are astronomical objects, but they can also be paradigm examples of physical objects (for the purpose of conceptualizing the physical) since, as Jackson (2000) and Snowdon (1989) point out, they are non-sentient, they exist independent of perception, they exist in space, etc.

But, now, one might insist that Göcke's (2009) arbitrariness objection has some merit. The paradigm physical objects seem to be selected based on their properties, such as being non-sentient and being located in space; however, Göcke asks, without a prior conception of the physical, why should we choose these properties as marks of the physical?<sup>3</sup>

I don't think this is a serious problem for the paradigmatic conception of the physical. The paradigm physical objects are supposed to be obvious examples of the kind of thing that physicalists believe that human beings ultimately metaphysically are. Göcke (2009) tries to show us that the paradigmatic conception suffers from a problem similar to Meno's paradox; however, like Meno's paradox, the solution is simple. It is not true that we don't know anything about the physical unless we have a complete conception of physicality. It is true that we cannot explain what makes trees, rocks, and mountains physical unless we have a conception of the physical, but we still can, and do, know that these objects are physical nonetheless. Yes, without a conception of the physical there will be some marginal objects that will be very difficult, maybe even impossible, to determine whether they are physical or not, but those will not be paradigm physical objects. Similarly, being non-sentient, being in space, and similar properties can be used to choose paradigm examples of physical objects, since, even without a conception of the physical, we know that physical objects typically have those properties. This is similar to the following. Even if we were not sure what life is and what makes biological organisms alive, we still would have paradigm examples of living beings, such as humans and cats, and, if we needed to, we could cite autonomous movement, breathing, reproducing, and similar properties as *tentative* marks of life. Just because one does not have a full-fledged conception of life, it does not mean that one chooses the paradigm examples of living beings blindly.

## The Problem of Incompleteness

However, even though the items in the list of paradigmatically physical objects are obviously physical, it is not obvious that the list of paradigm physical objects is comprehensive enough for defining the physical. For example, as far as we know, *dark matter* is only needed for the explanation of the intrinsic nature of galaxies, but not the intrinsic nature of tables, trees, mountains, or even planets and stars. Dark matter is posited by astrophysicists to explain the amount of gravitational pull in the spiral galaxies. Similarly, *dark energy* is only needed for the explanation of the accelerated expansion of the universe, so, as far

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<sup>3</sup> The solution Göcke considers is determining the paradigm cases of the physical by limiting them to those that are studied by physics, which collapses into the theory-based conception of physicality. (2009: 298).

as we know, the only thing that dark energy is needed in order to explain is the intrinsic nature of the universe itself, or, more precisely, intergalactic space. It seems, then, we need to add spiral galaxies and intergalactic space to the list of paradigmatically physical objects, besides trees and rocks.

Can we ever be sure that our list of paradigm objects is comprehensive enough to define “the physical?” Until very recently, we did not know that a special kind of matter that does not interact with electro-magnetic field must be posited in order to explain the stability of spiral galaxies and a new kind of vacuum energy must be posited in order to explain the behavior of intergalactic space. For all we know, there might be other phenomena in the universe that we are currently unaware of, whose explanation would require currently unknown fundamental properties. But, these properties would be trivially nonphysical according to any paradigmatic conception of the physical that we currently have.

In addition to the question of completeness of the list of paradigm physical objects, there is a further problem for the paradigmatic conception. If, say, a galaxy is a paradigm physical object, then dark matter is physical according to the paradigmatic conception of the physical. But, it is epistemically possible that dark matter is not physical. The term “dark matter” is just a place-holder for the source of the extra gravitational force that holds the stars in a spiral galaxy together. All we know about it is its gravitational effect.

If appealing to a list of paradigmatic exemplars of the physical is problematic, can we formulate a paradigmatic conception of the physical without a list? Nagel, for example, offers a paradigmatic conception without specifying the paradigm cases of the physical, he only loosely describes them. So, how can we decide whether newly discovered properties are physical or not? According to Nagel (1979):

New properties are counted as physical if they are discovered by explanatory inference from those already in the class. This repeated process starts from a base of familiar, observable spatio-temporal phenomena and proceeds to take in mass, force, kinetic energy, charge, valence, gravitational and electromagnetic fields, quantum states, anti-particles, strangeness, charm, and whatever physics will bring us next. (183)

But, this won't do. Familiar, observable spatio-temporal phenomena do not include dark matter or dark energy, and this conception categorically labels any other unfamiliar and, maybe, unobservable phenomena that cannot be epistemically reduced to familiar physical phenomena (and their constituents) as nonphysical.

Stoljar, on the other hand, does not give us a specific strategy to constrain the notion of a paradigm physical object, but he says “I will assume here that some such strategy is available, but it will not matter for our purposes to decide which is best” (2000: 257). I do not share his optimism. Let's look at some options he suggests as examples of possible strategies. According to Stoljar, we can constrain the notion of *paradigm physical object*

- (i) by speaking of physical objects-as-we-currently-conceive-them;
- (ii) by insisting that the notion of a physical object presupposes that such objects cannot turn out to be irreducibly mental;
- (iii) by operating with the notion of a purely physical object, where a purely physical object is something completely non-mental. (2000: 257, n. 10)

(i), however, suffers from the same problem with Nagel's suggestion. (ii) and (iii) delineate paradigm physical objects as objects that don't have irreducibly mental properties and objects that don't have mental properties, respectively. Similarly, Feigl writes: "By "physical" I mean the type of concepts and laws which suffice in principle for the explanation and prediction of inorganic processes" (1967: 10). As Feigl points out, his notion of physical is what Meehl and Sellars call "physical<sub>2</sub>." Meehl and Sellars define Physical<sub>2</sub> as follows.

An event or entity is physical<sub>2</sub> if it is definable in terms of theoretical primitives adequate to describe completely the actual states though not necessarily the potentialities of the universe before the appearance of life. (Meehl and Sellars, 1956: 252)<sup>4</sup>

Would these suggestions help us with characterizing the paradigm physical objects/states? So, *x* is physical if *x* is not irreducibly mental, or if *x* is not mental, or if *x* is not living, (we can select any of these to construct a list of paradigm physical objects/properties/phenomena) and whatever is needed to explain *x* is also physical. This seems to solve the problem of the completeness of the list.

### The Problem of the Underlying Non-Physical

But, suppose it is God who holds the galaxies together and expands the universe. Or, suppose there are angels who push the stars in the galaxies together. Now, are angels (or God) physical beings, just because they are needed in the complete account of paradigm physical objects/states? This problem is not only related to galaxies or intergalactic space; it is a general problem about any paradigmatically physical object. Suppose some kind of occasionalism or conservationism is true. If occasionalism is true, then all apparent causal/functional properties of the constituents of these paradigmatically physical objects supervene on God's will. Similarly, if conservationism is true, then continued existence of the constituents of ordinary objects is ontologically dependent on God's will. Then, no account of the intrinsic nature of trees and rocks would be complete without God. According to the paradigmatic conception of the physical, then, provided that occasionalism and conservationism are not conceptually impossible, it is conceptually possible that God of classical theism is physical, which is a *reductio* of the paradigmatic conception<sup>5</sup>.

This, I think, is an obvious problem, and I find it surprising that the philosophers who endorse a paradigmatic conception tend to ignore this problem. Maybe they think that, like paradigm physical phenomena, there are also paradigmatically non-physical phenomena, and if something is paradigmatically non-physical, like a god or an angel or a ghost, then it is exempt from being physical even if they are needed to explain paradigm physical

<sup>4</sup> Later, Sellars states that the paradigm physical features are "merely material" by which he means non-sentient (1981, n. 15).

<sup>5</sup> Montero (1999: 185-6) makes a similar point by pointing out that panpsychism would be compatible with physicalism if we define the physical this way, which would be unacceptable for many physicalists (cf. Strawson 2006).

phenomena. However, in determining the paradigmatically non-physical phenomena, we will face the same problems we have faced above when we were trying to characterize the paradigm physical phenomena, either extensionally or intensionally. How can we ever be sure that the list of paradigm non-physical entities is comprehensive enough unless we have an alternative conception of the non-physical based on which we construct our list? Furthermore, if we could give a paradigmatic conception of the non-physical, then we wouldn't need a paradigmatic conception of the physical in the first place, since we could use a *via negativa* conception of the physical: whatever is not non-physical (as understood in the paradigmatic conception of the non-physical) is physical.

## Conclusion

It is tempting to clarify what we mean by “physical” by appealing to some paradigmatically physical phenomena, as we very naturally do when we try, at least pre-theoretically, to clarify what we mean by “consciousness”, and some philosophers have indeed taken this route. But, as I have argued, this attempt is destined to fail. If a list of paradigmatically physical entities is given in order to conceptualize the physical based on the items in the list, then the problem of the completeness of the list arises. And, even if the paradigmatically physical entities are indirectly specified without providing a list, then a deeper problem still renders this conception implausible, namely the problem of the underlying non-physical. This is the problem that it is easy to imagine some non-physical phenomena, like divine will, playing an essential role in the constitution of the paradigmatically physical entities, which, however, would be conceptually impossible according to any paradigmatic conception of the physical.

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