

A proposed taxonomy of eliminativism*

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Abstract In this paper, I propose a general taxonomy of different forms of eliminativism. In order to do so, I begin by exploring eliminativism from a broad perspective, providing a comparative picture of eliminativist projects in different domains. This exploration shows that eliminativism is a label used for a family of related types of eliminativist arguments and claims. The proposed taxonomy is an attempt to systematise those arguments and claims.

Keywords:

Eliminativism, eliminativist argument, eliminativist claim, theoretical adequacy.

Una propuesta de taxonomía para el eliminativismo

Resumen En este artículo, propongo una taxonomía general de diferentes formas de eliminativismo. Para alcanzar este propósito, comienzo por explorar el eliminativismo desde una perspectiva amplia, proporcionando un cuadro comparativo de proyectos eliminativistas en dominios distintos. Esta exploración muestra cómo el término 'eliminativismo' es utilizado para caracterizar una familia de diversos tipos de afirmaciones y argumentos eliminativistas relacionados. La taxonomía propuesta es un intento de sistematización de dichos argumentos y afirmaciones.

Palabras clave:

Eliminativismo, argumentos eliminativistas, afirmaciones eliminativistas, adecuación teórica.

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The topic of this paper is eliminativism. Essentially, eliminativism is the claim that denies the existence of some type of thing in the world. The first thing you notice when you start researching into this topic is that there is extensive literature about eliminativism regarding *mental states* and our commonsensical understanding of the mind. On the face of it, one might be led to believe that the scope of eliminativism is exhausted by the intricate debates about the mind that have been taking place among philosophers and cognitive scientists. It is obvious that, if you are not familiar with those debates, you will find it difficult to understand what it is that, in the first place, there has been so much fuss about eliminating. This paper intends to take a step back and explore eliminativism from a broad perspective.

As we will see, people can be eliminativists about different things, which may belong in a variety of domains. For example, eliminativists may reject the existence of supernatural beings (e.g., Santa Claus, deities, trolls, fairies, etc.), biological classifications (e.g., species, races, cells, etc.), artefacts (e.g., chairs, doorknobs, etc.) and certain properties (e.g., colour, goodness, etc.). However, this does not mean to say that people holding eliminativist claims regarding these different types of things are all eliminativists in the same way. Examining different eliminativist arguments can show that there are different ways of denying that there are some X's and, therefore, that there are different ways of being an eliminativist about X's.

In general, whereas eliminativist claims seem to be alike in that they involve rejecting some candidate for eliminativism, there is not just one type of argument for eliminativism that applies to all of them. Indeed, it can be the case that arguments in two different domains are the same, while it can also be the case that there are different arguments within a common domain. Showing that this is the case will be the topic of the next three sections. The final section is an attempt to systematize what seems to amount to a family of related types of eliminativist arguments and claims.

Eliminating demons, chairs and moral properties

Some examples of eliminativism in different domains can offer a first glance at the diverse character of the eliminativist arguments and claims that this paper aims to examine. Let us consider the following cases of supernatural beings, artefacts, and moral properties, respectively.¹

a) The case of demons

Belief in magic and the workings of supernatural beings is common to all human cultures and ascribing responsibility to demonic powers for causing certain health states and conditions (e.g., loss of sight, developmental abilities, or diseases such as epilepsy) is a common historical example of pre-theoretical explanations. Together with the expansion of our reliable knowledge about the workings of natural things in the world around us, demonic explanations have become increasingly unpopular. Most of us would be hardly willing to accept the involvement of magical or demonic causes in people's health and diseases at the expense of natural causes as informed by current scientific enquiry. Thus, by denying the existence of demons to explain the exact causes of diseases, as well as any other natural events, many of us are now eliminativists about demons. Consider, for instance, the following remark made by Ramsey (2013) when commenting on eliminativism within the context of theory change.

The notion of a demon is just too far removed from anything we now posit to explain behavior that was once explained by demonology. [...] We dropped demons from our current ontology, and came to realize that the notion is empty—it refers to nothing real. (Section 2.2, para. 3)

Underlying eliminativism about demons is a principle that we may call *causal exclusion*. According to this principle, if instances of a particular type of phenomenon are found to have causes of a certain kind, then there will be no causal room left for certain other supposed causes. Someone may go on to claim that entities whose presumed existence is proved unnecessary for explaining natural

¹ For clarity of exposition, I will focus on some paradigmatic version of the eliminativist arguments involved in each of these cases.

phenomena are also ontologically suspect. For instance, given some demonic explanation that posits the existence of several supernatural entities in order to account for each of the currently known types of blindness due to infections, those hypothesised entities are candidates for eliminativism because we now can account for the different causes of visual impairment by natural causes (e.g., certain specific contagious microorganisms) without appealing to supernatural beings in ontological realms beyond the natural world.

Notice that eliminativism about demons by causal exclusion involves calling into question the existence of a putative type of entity (namely, demons) not only due to their explanatory irrelevance but also due to the way in which they are irrelevant. In other words, the claim is that because demons play no explanatory role, since they are *causally* unnecessary, we are justified in inferring that they do not actually exist.

b) The case of chairs

We normally think of the world we inhabit as populated by familiar objects such as people, buildings, chairs, stars, etc. and it seems reasonable to believe that these familiar objects, together with their familiar properties (e.g., colour, texture, size, shape, etc.), are features of reality in their own right, in that they have their own existence out there in the external world. However, at least in the case of some of these objects, notably objects like buildings and chairs, our intuition above has been challenged.

In theorising about the metaphysics of artefacts, for instance, van Inwagen (1990) argues that the putative objects we call, say, a house, a ship or a chair are not really objects that exist in their own right. More specifically, his thought is that what really exists is not what we call artefacts but only the basic particles they are made of. So he does not deny that there is some physical stuff there where we claim an artefact is but, instead, he just thinks such stuff is not a thing in its own right. This view is compatible with saying that what we call a house, a ship, a chair, or the like, is only some subatomic particles arranged, say, housewise, shipwise or chairwise, etc. Hence, his conclusion that “There are, therefore, no tables and

chairs, and there are no other artifacts” (p. 127).² In a similar vein, Elder (2007) describes the case of a carpenter who shapes pieces of wood in order to compose a desk and asks us to consider the question “Is it just that certain pieces of wood or bundles of cellulose fibres have gotten arranged differently towards one another, or has some object different in kind from either the pieces or the bundles been created?” (p. 33).

Both Elder’s question about the putative creation of a new object from the carpenter’s work and Inwagen’s explicit eliminativist conclusion about artefacts exemplify the problems regarding the ontological status of artefacts metaphysicians have been interested in. This problem can be characterized in terms of the following puzzle. On the one hand, contemporary metaphysicians have reasons to believe that artefacts are not part of a serious ontological inventory of the world. This claim does not amount to the assertion that there is nothing in the space where, say, a wooden chair is said to be, but, instead, that there are either just some pieces of wood or, even more strictly, that there is just some set of atoms in the void. On the other hand, there is a strong philosophical argument against the proposition that what we claim to be a given wooden chair and the pieces of wood (or, say, the bundles of cellulose fibres) it is made of are in a relation of identity with one another, in that the former and latter have all their properties in common (as per Leibniz’s Law). Consider that the chair and the pieces of wood differ in several ways from one another. For example, just as in the case of Elder’s desk, the pieces of wood in question existed before the chair was made, and they may continue to exist even if, as it might happen, the putative object chair was destroyed. Thus, the question arises as to whether the metaphysician is right when she claims that there are no such objects as chairs.

Let us focus on a version of the argument that artefacts such as chairs do not exist on the grounds that what we call a chair does not amount to an object in its own right. As Elder (2007) suggests, a common way to unpack this argument is in terms of certain wor-

² For a related view, see Unger (1979), and for different views that challenge this conclusion, see, e.g., McGrath (2005), Baker (2007), and Elder (2007).

ries about composition, where the issue to be decided is under what conditions things can compose an object (e.g., van Inwagen, 1990). So, for example, if someone claims that a proper object is the result of the combination between the carpenter's intentional arrangement of some pieces of wood and the uses to which people put that physical arrangement, then the question arises as to whether or not those intentional actions and uses are the kind of things that can be said to really compose a new object. The argument can be summarised as follows:

- Premise 1: There are things that can compose an object and things that cannot
- Premise 2: Real composite objects are made of things that can compose
- Premise 3: Putative composite objects such as chairs are not made up of things that can compose
- Conclusion: Putative composite objects such as chairs are not real composite objects

Consider that the eliminativist conclusion of this argument depends on when composition occurs, given the metaphysical assumption that composition occurs in some cases but not in others. So, eliminativism regarding chairs differs from eliminativism regarding demons in interesting ways. Firstly, rejecting chairs involves a case where the eliminativists deny that some physical stuff deserves to be taken as being a proper object, while rejecting demons involves a case where the eliminativists simply claim that there are no physical instances of a given type of objects. Secondly, whereas rejecting the existence of demons is primarily the result of an epistemological concern (namely, whether demons exist depends on whether they play a causal role in explanation), rejecting chairs is primarily the result of a metaphysical concern (namely, when it is that a given collection of things that really exist within the space where someone claims a chair is deserves to be taken as an object in its own right). Finally, the elimination of chairs, but not the elimination of demons, is constrained in a principled way, namely, in virtue of the metaphysical notion of composition and the conditions for its

occurrence. Note that chair eliminativists of this persuasion can be united by their strong commitment to the metaphysical presumption that the compositionality principle is the case even if they disagree about its conditions for occurrence. Hence, since the eliminativism regarding chairs can be said to be motivated by the violation of a presumed metaphysical principle, I will call it a case of elimination by *strong metaphysical offence*.

c) The case of moral properties and facts

Many of us think there are beliefs such as, for example, the belief that the peak of Mount Everest is the furthest summit from the centre of the Earth, which can be true or false depending on how things are in the world. In other words, if it is actually the case that the peak of Mount Everest is the furthest summit from the centre of Earth, then the mentioned belief is true. Otherwise, the belief is false. The metaphysical subtext, in this case, is that there really are certain properties in the world (e.g., planets, mountains, etc.) and facts about the world (e.g., the fact that two objects are at a given relative distance from one another, etc.) that can make certain beliefs either true or false. Those of us who are committed to the existence of those types of properties and facts are realist about them. By contrast, those who reject the existence of those types of properties and facts are antirealist about them.

Likewise, there are those who can be said to be either realist or antirealist about moral properties and facts, that is, the putative kind of stuff in or about the world that is supposed to make *moral beliefs* true or false.³ Thus, if someone claims that moral beliefs (e.g., the belief that all human beings are naturally good; the belief that implementing government surveillance is harmful, etc.) are true in virtue of how the world is, then there is a presumption that they are committed to the existence of certain moral properties and facts (e.g., the property of goodness that something may have; the fact that a certain act is morally wrong; etc.). It follows from this that those who claim that no moral properties or facts exist will also

³ A relevant analogy would be with realists or antirealists about the property of, say, *being red*, where being red is said to be either an objective or subjective property, respectively.

have to claim that either moral beliefs can be neither true or false in virtue of how the world is or, simply, that those beliefs are always false.

Well, some people claim that moral beliefs are always false because no moral properties or facts are really part of the natural world.⁴ For the purposes of the present section, suffice it to focus on the main arguments supporting John Mackie's thesis concerning the metaphysical status of morality. Mackie has advanced what may be called moral eliminativism⁵ or the claim that no moral facts or properties exist:

[...] what I have called moral scepticism is a negative doctrine, not a positive one: it says what there isn't, not what there is. It says that there do not exist entities or relations of a certain kind, objective values or requirements, which many people have believed to exist. (1977, p. 17)

This claim is specifically about the metaphysical status of moral properties and the like and it does not entail rejecting common sense moral prescriptions. Indeed, Mackie's moral eliminativism is compatible with accepting the usefulness of certain objectivist moral language, including moral judgments with deontological form (e.g., "Governments ought to be ready to help refugees seeking safety"), so long as the explanation of the apparent objectivity and universalizability of the referents of such language does not appeal to the existence of moral properties and the like as part of the *fabric* of the world. The reason for this compatibility is that, while the universalizability of moral judgments could be validated by the existence of moral properties and facts, the converse does not hold. Hence, the validity (or invalidity) of arguments for or against moral judgments can be said to be independent from the validity (or invalidity) of arguments for or against moral reality. As Mackie (1977) puts it, "The assertion that there are objective values [...], which ordinary moral judgements presuppose, is, I hold, not meaningless, but false" (p. 40).

⁴ For a defence of an opposing claim, see, e.g., Shafer-Landau (2003), and Scanlon (2014).

⁵ In this paper I use 'moral eliminativism' and 'moral properties and facts' in the same way Mackie (1977) uses the terms 'moral scepticism' and 'moral values', respectively. My choice of terms is merely motivated by consistency of exposition throughout this work. Since nothing hangs on which of this terminology is chosen in this section, you may very well take them to mean the same.

Mackie (1977) presents two main arguments against moral properties and facts, which take the form of two arguments for a species of Moral Error Theory—roughly, moral error theorists accept that there are moral claims but deny that they are actually true in virtue of how the world is. Mackie calls these arguments the *argument from relativity* and the *argument from queerness*, a version of each of which can be summarised in the following way.

In the case of the argument from relativity, it is first stated that, if there were objective values (i.e. if moral facts and properties were part of the fabric of the world), people would tend to agree about their moral views. However, (as the argument goes on), disagreement and variation in moral views is abundant across and within different societies, classes and periods. Moreover, (it is then stated), abundant disagreement about moral views is better explained by people's adherence to and participation in different ways of life, rather than by the existence of objective values. Therefore, (as the argument concludes), there are no objective moral values.

The argument from queerness is made up of two components, one is metaphysical and the other is epistemological. Given that the epistemological component is dependent on the metaphysical component, I think it is a good idea to combine both parts into a single argument in order to make that dependence explicit. Thus, the eliminativist argument Mackie (1977) defends can be set out in the following way. Firstly, (Premise 1) morality is committed to very strange or bizarre properties (viz., moral properties) which we could only track by some very special perceptual or discerning faculty. Hence, (Premise 2) if there were objective values, the world would have to be such that it contains very strange and bizarre entities or qualities which are “utterly different from anything else in the universe” (p. 38) and we would have to possess some very special perceptual or discerning faculty which is “utterly different from our ordinary ways of knowing everything else” (p. 38). But, (Premise 3) very queer qualities and perceptual faculties are not to be taken seriously. Therefore, there are no objective values.

How does moral eliminativism compare with eliminativisms regarding demons and chairs? To begin with, whereas rejecting demons involves rejecting the existence of a putative type of objects, moral

eliminativism involves rejecting the existence of both a putative type of objective properties attributed to proper objects as well as putative objective fact-like referents of moral judgments. In turn, while eliminativism regarding chairs is committed to a metaphysical principle, moral eliminativism as examined above is committed to the falsehood moral judgments, which rules out the metaphysical reality of objective values. Finally, moral eliminativism, but not demons eliminativism (and less clear in the case of eliminativism regarding chairs),⁶ allows for an independent account of the objectification of common-sense belief in the corresponding candidate for eliminativism. That is, moral eliminativism allows for there being some kind of objective common-sense moral claims without there being objective moral facts or properties.

The argument for moral eliminativism is a kind of argument which is primarily motivated by the presumption that putative objects whose metaphysics is too strange or confused do not really exist. Accordingly, I will refer to this type of arguments as eliminativist arguments by *metaphysical vagueness*.

So far, I have briefly presented three different examples of eliminativism which provides us with a general idea of the kinds of issues that may be at stake when someone intends to argue for the claim that some type of things in the world do not really exist. In particular, examples (a), (b) and (c) show that eliminativist claims arise across a wide range of domains. They also show that there is clearly not just one argument at work for all different types of eliminativist claims. I am now in a position to distinguish different types of eliminativist arguments and I will do so by taking a closer look at some prominent eliminativist projects.

Different types of eliminativist arguments

In this section, I will focus on eliminativist arguments in different domains. No special attention will be paid to objections that may have been made to these arguments. The goal is to present

⁶ Someone might think that talk of chairs and moral properties are alike because they are confined to non-scientific domains such as folk talk of artefacts and common sense normative claims, but then again, artefacts are sometimes accepted as proper natural kinds (e.g., in the field of paleoanthropology) and, hence, as objects of scientific enquiry (see, e.g., Machery, 2009, section 8.2.1)

and illustrate a list of arguments that have actually been given for eliminativism. A discussion on how these arguments compare and contrast will help us advance a general taxonomy of eliminativism, which is to be the focus of the last section.

Elimination of propositional attitudes

A common intuition is that people's behaviour is somehow determined by their inner mental states and processes. This intuition is reflected in our daily mentalistic discourse such as, for example, when I explain my daughter's decision to postpone her planned picnic in the park due to bad weather by saying that she believes the rain would ruin the picnic and desires to have a good time with her friends. The explanatory and predictive powers of this common sense understanding of the way our minds affect our behaviour have motivated the idea that such understanding really embodies a true theory of our mental life. Roughly, a view like this claims that mental states such as beliefs and desires are real inner states with causal powers and that common sense psychology (also known as folk psychology) presupposes law-like generalizations of the following type: If someone desires that X and believes that the best way to get X is by doing Y, then (all else being equal) she will intend to do Y.

Some cognitive scientists (e.g., Fodor, 1987) think science will eventually vindicate common-sense psychology and the existence of mental phenomena as described above. Others think otherwise. Consider the following thesis defended by Churchland:

[...] our commonsense conception of psychological phenomena constitutes a radically false theory, a theory so fundamentally defective that both the principles and the ontology of that theory will eventually be displaced, rather than smoothly reduced, by completed neuroscience. (1981, p. 67)

In order to justify this radical claim, known as Eliminative Materialism, Churchland puts forward an argument that takes three main steps. In the first step, it is argued that common-sense psychology constitutes an empirical theory whose central posits are so-called propositional attitudes. As their name suggests, proposi-

tional attitudes are normally characterized as the combination of attitudes (e.g., believing, desiring, hoping, etc.) and propositions (e.g., “there is bad weather”). According to Churchland, the structure of common-sense psychology resembles that of some physical sciences, the difference being the domain of abstract entities over which they quantify. For instance, while law-like relations in mathematical physics exploit numbers, law-like generalizations in common-sense psychology exploit propositions. Recognizing the theoretical status of common-sense psychology, Churchland claims, allows for a plausible explanation of several issues, including, among others, the explanation and prediction of behaviour. He thus concludes that there are good reasons for theorists to take the theoretical status of common-sense psychology seriously.

If common-sense psychology is really an empirical theory, then it is possible for this theory to be refuted and, hence, for its set of theoretical posits to be displaced. Accordingly, in a second step, Churchland argues that common-sense psychology is deeply mistaken on the grounds that it has a very limited explanatory scope (e.g., it provides no accounts of mental illness or learning processes involving infants and other animals); it is a stagnant theory—“The FP of the Greeks is essentially the FP we use today” (Churchland, 1981, p. 74)—and it is just as unreliable as other unscientific theories (e.g., alchemy and cosmology); and it is incoherent with the rest of the sciences in that it is not reducible to any other physical science. In his words, “Any theory that meets this description must be allowed a serious candidate for outright elimination” (p. 76). Thus, the third and final step of Churchland’s argument consists of the radical conclusion that, because a theory of propositional attitudes is deeply mistaken, we are justified in inferring that its central posits do not really exist.

The eliminativist conclusion regarding propositional attitudes championed by Churchland can be made explicit in the following argument, adapted from Stich (1983 and 1996):

- Premise 1: Propositional attitudes are the posits of a common-sense psychological theory called “folk psychology”
- Premise 2: Folk psychology is a deeply mistaken theory of the human brain/mind because it epically fails to provide a reductive and coherent explanation of the workings of the human brain/mind
- Premise 3: The posits of deeply mistaken theories do not exist
- Conclusion: Propositional attitudes do not exist

As the second premise of this argument suggests, what is at stake in Churchland’s argument against the tenability of common-sense psychology is whether or not there are reasons to think that this folk theory is likely to be vindicated scientifically.⁷ Thus, because the eliminativist conclusion of the argument is said to hang on a total failure to meet the requirements for such vindication, arguments of this kind can be dubbed eliminativist arguments by *total explanatory failure*.

Compared to other eliminativist arguments, elimination by total explanatory failure is closer to elimination by causal exclusion in that both of them invoke some explanatory drawback as a crucial argumentative step. For example, while propositional attitudes are said to fail to explain the causes of behaviour, demons are said to fail to explain the causes of certain diseases. Indeed, these two types of arguments involve candidates for elimination that are said to be part an explanation of a given phenomenon, though perhaps an explanation no longer regarded as correct by current scientific theory. However, eliminativism regarding propositional attitudes and eliminativism regarding demons differ in an interesting respect, namely, in the way they failed to be scientifically relevant. While rejecting demons is a case where the replacing type of entities (e.g., micro-organisms) is supposed to explain the same type of phenomena (e.g., loss of sight) formerly attributed to the replaced type of entities (e.g., demons), rejecting propositional attitudes is a case where such kind of replacement is out of the question. In this latter case, given that common-sense psychology is said to have gone ut-

⁷ Indeed, it can be said that, regarding the prospects of scientific vindication of Folk Psychology, the jury is still out. For various defences of Folk Psychology, see, e.g., Horgan & Woodward (1985), Kitcher (1984), Fodor (1987), and Lahav (1992).

terly wrong, the eliminativist's claim is that the theory is also mistaken about the type of phenomena of which it is supposed to be a misdescription.

Someone might want to insist that, because in both cases there do seem to be phenomena that are in need of some explanation (viz., why people act as they do, and why people fall sick), one should feel inclined to conclude that there is no significant difference between eliminativism about propositional attitudes and eliminativism about demons. However, when taking a closer look at the way in which demons and propositional attitudes are said to fail to be the central posits of explanatory theories, it is clear that only propositional attitudes and their causal relation to our behaviour can be accepted as the posits of a certain legitimate scientific contender. The reason for this is that psychological explanation in terms of propositional attitudes is meant to provide an empirical and naturalistic account of the causes of behaviour, so what the eliminativist thinks is that there must be some more adequate explanation of the causes of behaviour, even though what it is is not yet known to science. By contrast, for the eliminativist regarding demons, even though there is room in scientific theorising for episodes that are taken to be instances of demonic possession, there is no room for instances of demonic possession in scientific theorising about the causes of certain illnesses, since demons are not meant to be legitimate objects of scientific study.⁸ In this sense, while there could be said to be no reason to posit psychological explanations that appeal to propositional attitudes (e.g., because there might be better empirical alternative), there would seem to be every reason not to posit explanations in terms of demonic possession.

To make this latter point clearer, let us roughly consider a recent trend in philosophy of physics called *eliminative structural realism* (ESR).⁹ Scientific theories normally posit unobservable entities in order to explain observable phenomena. Extensive philosophi-

⁸ Of course, someone might claim that there can be realists regarding both propositional attitudes and demons, but, then again, the distinction between legitimate and illegitimate objects of study remains since only the realist about propositional attitudes is committed to the kind of realism that is scientifically relevant (i.e., one which is aimed at reflecting the casual structure of the world without appealing to supernatural beliefs).

⁹ I thank an anonymous reviewer for drawing my attention to ESR.

cal debates about scientific realism have centred around the issue of whether or not we are justified in inferring that those unobservable entities are correctly described by scientific theories (see, e.g., Ladyman, 2016). Standard scientific realism is the optimistic view that our best scientific theories are successful because they are (at least, approximately) true, and *structural realism* (SR) is a form of scientific realism.¹⁰ According to SR, we should epistemically commit ourselves to the structural content of our theories, not to belief in the nature of the unobservable world. When combined with the ontological claim that there are no objects and that structure is all there is, so-called ontic structural realism obtains (OSR). ESR is a form of OSR, a prominent defence of which can be found in French (2014). In his view,

we can still utter truths about, and in general talk of, physical objects, while eliminating them from our fundamental ontology in favour of structure. (2014, p. VIII)

Since French takes that structure to be physical, ESR is another case where certain unobservable objects are eliminated because they are thought to be explanatorily irrelevant, without challenging the commitment to scientific realism.

Elimination of races

Among both scholars and ordinary people, there are those who have appealed to a putative biologically-grounded notion of races to distinguish alleged natural divisions and subdivisions among human beings (e.g., Caucasian, African, Asian, Spaniard, Amerindian, etc.). One recurrent assumption behind this practice is that these divisions are biologically real, in that they would have biological foundations which are made manifest in physical and behavioural features such as skin colour, eye shape, health status, intelligence, etc. Despite this persistent tendency to categorize human beings into different races on those foundations, eliminativism is a widely held view about biological races nowadays.¹¹

¹⁰ Popularised by Worrall (1989), 'structural realism' is an umbrella term that encompasses a cluster of related positions in philosophy of physics.

¹¹ For arguments defending the existence of races on different grounds, see, e.g., Gooding-Williams (1998), Andreassen (2004), and Sesardic (2010).

The question that biological race eliminativists answer negatively is whether there are races, given their informed judgment that there are no biological grounds for distinguishing human beings into distinct and discrete categories of the sort. A common understanding of these grounds is in terms of some type of essences, such as, for example, certain genetic properties, given the belief that these essences can determine certain visible physical traits. However, as the current scientific consensus in this respect suggests, there is no evidence to support the view that there is a significant correlation between people who share phenotypic features and any particular biological conception of essences. Indeed, genetic change does not always result in physically visible characteristics and (contrary to popular belief) even the most visible physical traits fail to work as a criterion to distinguish putative racial groups. For example, Zack (2002) has objected to the idea that the skin colour can be used to distinguish racial groups on the grounds that, because people's skin tones vary gradually rather than discretely, it is not possible to say that people with certain skin tone (e.g., white) always differ from people with a different skin tone (e.g., black) in the same way. Moreover, people who are classified into different races can sometimes be judged to differ from one another less than some people who are supposed to be of the same race. Thus, as the argument goes, because there is no notion of essences that can be said to biologically ground divisions of human beings in terms of visible physical traits, there are no grounds for the existence of a scientifically-interesting category of race. If scientific realism is embraced, such as in the case of Zack (2002), then being an eliminativist about the scientific category of race amounts to a metaphysical claim regarding the putative category of race, just as with other displaced pre-scientific notions such as phlogiston, humors, etc.

Consider how the case of eliminativism regarding races compares and contrasts with the other cases of eliminativism that we have already discussed. When characterising the case of eliminativism by causal exclusion, it was taken as a matter of fact that there is nothing in the world that counts as an instance of the type of things that demons are supposed to be. By contrast, rejecting races does

not deny that the entities (viz., people) that are labelled “white person” or “black person” exist. Instead, the claim is that our commonsensical way of thinking about races does not correspond to a real category on the grounds that it does not amount to a scientifically grounded category. Put differently, while the one claim is that nothing is actually an instance of a putative given kind (viz., the class of demons), the other claim is something like, given certain superficial differences among people, whatever they might be an instance of, they are not an instance of a given putative kind (viz., the category of races). Thus, resorting to the standard conception of a type/token distinction, to say that there are no demons by causal exclusion means that it is explanatorily irrelevant to assume that there are *tokens* of some type of things. Conversely, to say that there are no scientifically grounded races means that it is unwarranted to assume that there is a certain *type* of things in itself.

Note that this latter claim also applies when contrasting two different arguments. For instance, it would appear that the argument against races resonates with the argument against chairs in that both of them involve the conclusion that something we think is real is really something that should not be taken to be real in its own right. However, this is not the case, since in the argument against races, not in the argument against chairs, the conclusion accepts the type/token characterisation above. More specifically, what a chair eliminativist denies is that there are certain objects (viz., chairs) that are tokens of a certain type of things which is completely different from the type of things that the subatomic particles making up the objects are tokens of.

Is the argument against races an eliminativist argument by total explanatory failure just as the argument against propositional attitudes is? In some important respects, the answer to this question is yes. Consider that, if races are to be rejected from scientific taxonomy, it is, presumably, because this putative category fails to be relevant for supporting many scientific inductions about groups of human beings or the individuals that are said to belong to those groups. If so, the elimination of races could also be conceived of as a case where the existence of a given type of things is denied on the basis of explanatory failure.

However, as in the case of moral eliminativism regarding the need to develop some theory of common sense morality without appealing to the existence of objective moral values, race eliminativists do not need to reject what we may call *talk of races*. Recall that in Zack's argument, just as in the case of Mackie's argument, the eliminativist conclusion is negative in that it is about what there is not, not what there is. So, there is still room for what both authors present as some alternative understanding of race and moral talk, respectively. Indeed, what each of them proposes is an account about certain types of things that we know are false but about which it is somehow good to keep talking (e.g., race talk might still be useful to discuss, characterise and resist certain forms of discrimination and attitudes towards specific social groups and communities which we could not otherwise effectively identify).

The notion of *talk of x* I have just introduced deserves further clarification. Eliminativists about a given type of things typically go on to make a further claim which, even though they also label as 'eliminativism', is not a metaphysical claim at all. To make this point palpable, let us first consider the distinction Mallon makes between *normative* eliminativism and *metaphysical* eliminativism:

Typically there is a close association between metaphysical positions on race and normative positions on 'race' talk. Racial sceptics typically hold that the nonexistence of race supports 'race' talk *eliminativism*. Since race does not exist, it would be false and misleading to continue to use 'race' talk as if it does. (2006, p. 526; emphasis in original)¹²

As Mallon points out, what eliminativists normally argue from their conclusion that there are no races is that the concept of race should be avoided. However, as we will see, it is perfectly possible that metaphysical eliminativism regarding X does not support normative eliminativism regarding our talk of X. For example, Mackie (1977) thinks that, because there are no objective moral properties or facts, morality is not to be understood as the result of discovery, but as something that is to be made. Roughly, the idea is that issues

¹² Mallon uses the term 'racial scepticism' for the metaphysical view that races do not exist at all.

regarding, say, what moral views to adhere to are to be the result of a decision-making process that yields certain principles of conduct for guiding or controlling people's choices of action. In this sense, even though Mackie denies there are objective moral properties, he is, at the same time, committed to the use of moral talk (i.e., the use of moral terms or concepts) that can play a role in evaluating human conduct. Likewise, Mallon's distinction between metaphysical positions on race and normative positions on race talk in the quote above allows us to better understand cases where eliminativists regarding the existence of races can be, at the same time, advocates of race talk. Indeed, the form of race eliminativism put forward by Zack (2002) exemplifies such a case in that, even though she claims that races of any type do not exist, she also defends an alternative view of races (viz., a form of racial constructivism) according to which racial categories are socio-culturally constructed. In such a view, whereas the term 'race' is scientifically otiose, it can very well play a meaningful role in promoting, for example, race-based affirmative action aimed at favouring the well-being of members of certain disadvantaged groups.

The distinction between metaphysical and normative eliminativist positions I have just introduced will be useful at the moment of drawing some general conclusions about eliminativist arguments, so I will come back to it in the later sections of this paper. For now, suffice it to conclude our characterisation of the argument against the existence of biologically-grounded races by noting what I take to be one of its most salient features, namely its weak defence of the elimination of racial terms from scientific taxonomy. As I mentioned before, this argument is about what there is not, in that it denies that there are races in the world, arguing for the scientific elimination of racial terms without defending a scientific alternative. The argument also states, as a central reason for its eliminativist conclusion, that there are no plausible biological grounds for racial groupings, grounds which have been characterised in certain specific ways. However, it is still possible for someone to argue, for example, that there can be natural racial groupings which do not appeal to those particular foundations, but, instead, to other foun-

dations that may or may not be biological. Likewise, it is possible to argue that, just as it is useful for us to retain racial talk for social or political reasons, scientists may very well retain racial taxonomy even if they doubt that there are biologically-grounded racial groupings, so long as race talk can help discover generalizations about, say, human behaviour or the like. Thus, since arguments of this type are essentially meant to support a negative conclusion, I will dub them eliminativist arguments by *weak metaphysical offence*.

Elimination of the innate

Within the context of philosophical psychology, the questions of what innateness is and what it means to say that a given trait is innate are said to have no clear answers. Cowie (2009)¹³ characterises at least 16 different ways in which the concept of innateness has been understood, which, in her opinion, reflect the state of disarray the notion of innateness is in. Since there is no common way in which all these different understandings of this notion can be analysed, it is not surprising that some people have felt tempted to question its explanatory usefulness and advocate its ostracism from scientific theorising (e.g., Griffiths, 2002). Cowie offers an instructive discussion on whether there is a plausible case for the eliminativist option with respect to the innate. She dubs this option as the case for *ElimiNativism*. Importantly for the purposes of this section, Cowie's discussion provides us with a general taxonomy of different types of eliminativist views regarding the innate.¹⁴

According to Cowie, arguments supporting elimiNativism can be initially distinguished in terms of two different kinds of eliminativist projects which she calls ontological and linguistic (or conceptual),¹⁵ respectively. The question the ontological elimiNativist attempts to answer is whether a given trait in the world is innate. The question the linguistic elimiNativist attempts to answer

¹³ Unless otherwise indicated, all reference to Cowie's work in this section corresponds to Cowie (2009).

¹⁴ Even though Cowie (2009) is specifically interested in assessing Stich's position regarding elimiNativism, I will mainly focus on her proposed general taxonomy of eliminativist arguments with respect to the innate.

¹⁵ With respect to eliminativism, Cowie (2009) makes no distinctions of usage between 'terms' and 'concepts'. Since nothing in this section is meant to hang on this distinction, I will use these terms interchangeably too.

is whether or not the term 'innate' plays a useful explanatory role in philosophical or scientific theorizing about cognition.

While being distinct from one another, these two projects are also related. Thus, just as there can be reasons to think that theorists should stop using a given theoretical term on the grounds that the putative type of objects that the term purports to refer to does not really exist, there can be reasons to continue with its use. Cowie mentions the case of 'centres of gravity' in different contexts and that of 'electron' (as referring to pure particles) in chemistry, but we have also discussed the similar case of 'race' and its normative relevance. Alternatively, theorists sometimes conclude that some putative type of objects does not really exist from the realisation that the terms used to refer to them (e.g., 'ether', 'soul', etc.) are not fit for a serious explanatory theory. However, there are terms which, even though theorists would deem them not fit for philosophical or scientific theorising, refer to certain types of things whose existence would not be easy to deny. Cowie mentions terms such as 'sock', 'dirty joke' and 'herb', but we have also discussed the similar case of 'chair' and other artefacts.

Together with the previous distinction, Cowie also distinguishes between three kinds of eliminativist arguments in philosophy, arguments she invokes to evaluate their possible application regarding the innate. She calls them 'Aren't Any' eliminativism, 'Doesn't Work' eliminativism and 'It's a Mess' eliminativism, respectively. Let us have a look at each of them in turn.

Aren't Any eliminativist arguments are said to be aimed at the ontological eliminativist project and, sometimes, at the linguistic one. Their eliminativist conclusions normally derive from the realisation that nothing in the world satisfies the analysis of a given concept. Cowie thinks Stich (1983) provides a suitable example of this first type of arguments, since Stich's argument that there are no such things as beliefs derives from the realisation that nothing really satisfies the analysis of the term 'belief'. Cowie's reconstruction of Stich's argument against the existence of beliefs can be set out in three main premises and an eliminativist conclusion. The first premise states that a scientific taxonomy of mental states does not admit states

that are individuated in terms of content. The second premise states that the folk psychological term of 'belief' is inconsistent with a scientific taxonomy of mental states because 'belief' is supposed to designate mental states that are essentially individuated in terms of its content. The third premise states that the putative type of entities designated by folk psychological terms that are inconsistent with a scientific taxonomy of mental states must be eliminated. Accordingly, the conclusion of the argument is that beliefs are a putative type of entities that must be eliminated.

One way in which this argument could work in the case of innateness, as Cowie notes, is by establishing that there is something that can be said to be essential to the concept 'innate'. Thus, if this was the case, an elimiNativist could attempt to defend the conclusion of Aren't Any eliminativist arguments of the following form:

- Premise 1: A scientific taxonomy of psychological traits T does not admit traits that are individuated by the essential property K
- Premise 2: A scientific taxonomy of psychological traits T is inconsistent with the folk term 'innate' because this term designates a putative type of traits that are individuated by the essential property K
- Premise 3: Putative types of traits designated by terms that are inconsistent with a scientific taxonomy of psychological traits T must be eliminated
- Conclusion: Innateness is a putative type of traits which must be eliminated

Doesn't Work eliminativist arguments are said to be primarily aimed at the linguistic eliminativist project and their eliminativist conclusions derive from the realisation that the concept under analysis is part of what Cowie calls a bankrupt theory (i.e., a totally inadequate or scientifically useless explanatory theory). This form of argument is exemplified in the case against propositional attitudes of folk psychology defended by Churchland (1981). I discussed this argument at the beginning of this section as an example of Total Explanatory Failure eliminativism, so I will not reproduce it here. Instead, I will present the form such type of argument could take if it was to apply for in the case of elimiNativism.

First, the elimiNativist would need to argue that the nativist's research program is part of an empirical theory. Then, she would have to show that such a theory is part of a degenerating research program which simply cannot be scientifically vindicated. The final step would have to argue from such scientific failure to the conclusion that the folk concept of innateness should be abandoned. The general argument can be set out as follows:

- Premise 1: The concept of 'innate' is part of an empirical theory
- Premise 2: The theory the concept of innate is part of is a totally degenerate and inadequate scientific program
- Premise 3: The concepts of totally degenerate and inadequate scientific programs should be eliminated
- Conclusion: The concept 'innate' should be eliminated

Finally, *It's a Mess eliminativist arguments* are said to be primarily aimed at the linguistic eliminativist project, but they can sometimes be taken to support the ontological project too. Their eliminativist conclusions derive from the realisation that a given concept simply has no determinate analysis on the grounds that it is too vague or confused for useful explanatory purposes. Cowie illustrates this type of argument along the lines of proposals developed by Griffiths (e.g., 2002), Bateson (e.g., 1991) and Mameli & Bateson (2005). The general form of an *It's a Mess* elimiNativist argument can be set out as follows:

- Premise 1: 'Innate' is a (hopelessly) muddled and vague term that resists analysis
- Premise 2: (Hopelessly) muddled and vague terms that resist analysis should be eliminated from scientific theorising
- Conclusion: The term 'innate' should be eliminated from scientific theorising

Just as in the case of Total Explanatory Failure eliminativism regarding propositional attitudes, *It's a Mess* linguistic elimiNativism can flirt with Its ontological counterpart, but, again, the linguistic eliminativist conclusion of the one does not directly entail the ontological conclusion of the other. Thus, the challenge for the *It's a Mess* linguistic elimiNativist is to provide some additional premises

to the previous argument such that it can be possible to derive the claim that nothing in the world is innate from the claim that ‘innate’ is unsuitable for scientific purposes.

Cowie points out an interesting issue arising from this latter alternative: concepts that are deemed intractably vague and too messy to be taken seriously can, at the same time, play a productive scientific role. This consideration may not prevent us from rejecting those concepts. An eliminative attitude towards certain useful yet imprecise terms is also exemplified in Quine’s concerns regarding the ontological commitments of our scientific theories. Quine (2013) thought that the terms of our ordinary language fail to clearly pick out objects that we could take to really exist. For us to be in a position to commit ourselves to some ontological claim, further systematization or *regimentation* of the language of science is in order, which, in his view, should be done by means of a formal language. As a result of formal refinement, ontological commitments of ordinary discourse can be either retained or abandoned (as per ontological reduction), depending on whether or not we want to keep the roles we formerly attributed to the objects of the defective expressions.

According to Quine, defining or explicating philosophical problems by showing that they are the result of verbal confusions is part of the process of regimenting our theories. He illustrates this point with the concept of ordered pair in set theory, where several ways of defining that concept makes it unnecessary that we commit ourselves to the existence of the entities we call ‘ordered pair’. Hence the idea that explication is elimination:

We have, to begin with, an expression or form of expression that is somehow troublesome. It behaves partly like a term but not enough so, or it is vague in ways that bother us, or it puts kinks in a theory or encourages one or another confusion. *But also it serves certain purposes that are not to be abandoned.* Then we find a way of accomplishing those same purposes through other channels, using other and less troublesome forms of expression. The old perplexities are resolved. (2013, pp. 239-240, emphasis added)

As Quine suggests, terms which are troublesome or confused can be deemed ripe for elimination, irrespective of their provisional scientific utility and convenience. I agree with the importance of this observation, so, for my own classificatory purposes, I will characterise eliminativist arguments appealing to the theoretical vagueness of certain scientific concepts (e.g., memory, gene, centre of gravity, etc.) as eliminativist arguments by *explanatory vagueness*.

Types of eliminativist claims

I am now in a position to present a classification of different types of eliminativist claims. I will do so in a way that benefits from the distinction Cowie (2009) advances between ontological and linguistic eliminativist projects. Roughly, the first project asks whether some type of objects exists or whether a given property is instantiated in the world, and the second is aimed at deciding whether a given theoretical term should be used or abandoned for scientific theorizing. Since eliminativists are not always explicit about the precise scope of their claims regarding the previous distinction, it will be useful to set out our classification in such a way that it allows us to discriminate cases in which the eliminativist claims are non-committal to either the ontological or linguistic projects. Accordingly, a general classification of eliminativist claims can be made in terms of the following three categories:

- A. Claims which are committed to both ontological and linguistic elimination
- B. Claims which are austere committed to either ontological or linguistic elimination
- C. Claims which are indulgently committed to either ontological or linguistic elimination

Type A claims are explicitly committed to the elimination of some type of things in the world (e.g., beliefs) and the abandonment of the terms used to refer to those things (e.g., the term

‘belief’).¹⁶ Type B claims, in turn, are explicitly committed to only one of the two eliminativist projects and, at the same time, they are neutral or non-committal about their corresponding counterparts. This is the case of the eliminativist claims connected with the three types of eliminativisms exactly as characterised by Cowie (2009), where each type of eliminativism regarding the innate is primarily aimed at only one of the two projects (namely, either ontological elimination of X or linguistic elimination of ‘X’). The eliminativist claim about artefacts is another example of type B claims, in the sense that it strictly focuses on the metaphysical question. Finally, type C claims can be exemplified by the eliminativist claims about race and moral properties discussed in section 3, both of which are committed to ontological eliminativism yet permissive (and inclusive) about the elimination of the corresponding theoretical terms ordinarily used to talk about races and moral properties, respectively (cf. the case of the fruitful usage of the term ‘gene’ as illustrated in Cowie 2009 with respect of its historical development).

With this general classification of claims in hand, I will now turn to supply a classification of the different types of eliminativist arguments discussed in this paper. This new classification will build on Cowie’s proposed taxonomy of different kinds of arguments for eliminativism and the classification of eliminativist claims proposed in this section.

A taxonomy of eliminativist arguments

As it pertains to contemporary philosophical and scientific theorising, it is reasonable to think that the main motivation for eliminativists to argue for the elimination of some X is the thought that X fails to be useful for gaining better understanding of the way things really work in nature. In view of that, in this section I will use ‘theoretical adequacy’ as an umbrella concept to draw a general classification of eliminativist arguments. Roughly, for some X to be theoretically adequate, it should satisfy conditions for adequate

¹⁶ Consider the case against our folk concept of ‘emotion’ pursued by Griffiths (1997).

explanations such as the facilitation of inductive generalisations and hypothesis generation, theoretical unification, coherence with whatever reliable knowledge we may already have, and the like.

Given the assumption that a certain candidate for eliminativism is thought to fail to meet some kind of conditions for theoretical adequacy, different types of eliminativist arguments can be initially sorted out according to three main categories—irrespectively of how *good* or *bad* arguments they can be. Call them Eliminativism due to offence to metaphysical presumption (*Metaphysical Eliminativism*), causal/explanatory inadequacy (*Causal/Explanatory Eliminativism*), and heterogeneity (*Heterogeneity Eliminativism*). These categories are intended to generalise from what Cowie (2009) characterises as Aren't Any, Doesn't Work, and It's a Mess eliminativism, respectively. Each of the three broad categories proposed here comprises a number of subcategories, where the several types of eliminativist arguments already explored can be allocated (see table 1, below).

The category of arguments which are theoretically inadequate as per Metaphysical Eliminativism comprises two subcategories, namely eliminativist arguments due to strong metaphysical offence and eliminativist arguments due to weak metaphysical offence. Strong metaphysical offence eliminativism (e.g., artefact eliminativism) argues that the existence of some type of thing should be rejected due to the violation of a certain metaphysical principle (e.g., the principle of 'compositionality' introduced in section 2). These arguments are aimed at ontological eliminativism, but they are neutral about linguistic or conceptual eliminativism (e.g., artefact eliminativists do not explicitly claim that talking about chairs should be avoided in, say, paleoanthropological research). Regarding our previous classification of claim types, eliminativism by strong metaphysical offence should be associated with type B claims. Likewise, eliminativist arguments due to weak metaphysical offence are aimed at ontological eliminativism (e.g., there aren't essential properties for races), but, since these arguments are explicitly permissive regarding the theoretical terms used to talk about the objects that are candidates for ontological eliminativism, these arguments are best associated with type C claims.

Arguments which are theoretically inadequate as per Causal/Explanatory Eliminativism include what I have called eliminativism by causal exclusion and eliminativism due to total explanatory failure. Eliminativism by causal exclusion (e.g., eliminativism regarding demons, phlogiston, humors, etc.) argues that the existence of X should be rejected because X is causally irrelevant for a scientifically relevant explanatory theory, especially one that is committed to scientific realism or one that can be falsified. Eliminativism by Total Explanatory Failure (e.g., eliminativism regarding propositional attitudes) argues that X should be rejected because X is part of a deeply mistaken theory, yet a scientifically relevant one. Regarding our classification of claim types proposed above, eliminativism by total explanatory failure should be associated to type A claims—Indeed, Churchland (1981) does not only argue for the elimination of ‘propositional attitude’ but also for the non-existence of propositional attitudes. In turn, eliminativism by causal exclusion is better associated to type B claims, since causal exclusion eliminativist arguments are primarily aimed at ontological elimination—perhaps, in the absence of better and more precise terms, there was even a time when talk of demons, phlogiston and the like was useful even though their putative referents were considered highly ontologically suspect.

The types of arguments which are theoretically inadequate as per Heterogeneity Eliminativism include both eliminativism due to explanatory vagueness and eliminativism due to metaphysical vagueness. Eliminativism by Explanatory Vagueness (e.g., ‘innate’, innateness, etc.) argues that, because a given term has no determinate analysis, it should be rejected. Someone endorsing this type of eliminativism may or may not go on to argue that a given vague concept entails the ontological rejection of the type of thing this concept might putatively designate, depending on whether some intermediate premises are provided to show that this may be the case. Eliminativism due to metaphysical vagueness (e.g., moral properties) argues that we should reject the existence of a given type of properties or facts on the grounds that their existence would require that we previously accept the existence of some certain types of things that are too strange, confused or

improbable, given what we know and commonly think about everything else.

Explanatory Vagueness eliminativist arguments can be associated to any of the three types of claims. For example, as Cowie (2009) illustrates it, the many different mental states and processes that can be associated with the term 'memory' have led memory experts in different fields to be eliminativists about 'memory' yet not about memory. So, in this case, 'memory' eliminativism by Explanatory Vagueness is best associated with type B eliminativist claims. However, when some appropriate premises are included such that the eliminativist argument about 'memory' is also intended to support the rejection of memory, then memory eliminativism by Explanatory Vagueness is best associated with type A.¹⁷ In turn, even though terms such as 'memory' happen to be theoretically vague, some may still deem them useful terms for serious explanatory purposes (e.g., Hampton, 2010; Strohming & Moore, 2010), irrespective of whether their referents are thought not to exist. In this latter case, the use of 'memory' can be regimented for convenience in certain classificatory schemes, thus meeting conditions for theoretical adequacy such as explanatory unification (cf. Margolis & Laurence, 2010). This third form of eliminativism by Explanatory Vagueness is then best associated with claims of type C.

¹⁷ A related example can be found in Machery (2009), where it is contended that the term 'concept' should be eliminated from the theoretical vocabulary of psychology on the grounds that what psychologists call concepts do not really form a *single* natural kind, and that keeping this notion would hinder the progress of that science.

Types of eliminativist arguments			Types of eliminativist claims		
Meta-physical Eliminativism	Causal / explanatory Eliminativism	Heterogeneity Eliminativism	A Ontological AND Linguistic	B (Austerely) Ontological OR Linguistic	C (Indulently) Ontological OR Linguistic
Strong metaphysical offence				*	
Weak metaphysical offence					*
	Causal exclusion			*	
	Total explanatory failure		*		
		Explanatory vagueness	*	*	*
		Metaphysical vagueness			*

Table 1: Taxonomy of eliminativist arguments and claims.

Conclusion

In this paper, I have provided a provisional general taxonomy for systematising what amounts to a family of related types of eliminativist arguments and claims. The proposed classification is grounded on the analysis of different types of eliminativisms. Surveying eliminativist arguments and claims in different domains has helped to build a picture of the different ways people can be eliminativist about some type of thing. While all eliminativist arguments are aimed at rejecting some type of thing, they differ from one another in the way that eliminativists argue that a certain candidate for eliminativism fails to be theoretically adequate, as well as the scope of their related eliminativist claims. I have chosen to set out a taxonomical format which benefits from related proposals and discussions developed by Cowie (2009). The result is a general classification that reflects the way Cowie's proposal could generalise as a taxonomy of most (if not all) of the available kinds of eliminativist projects.

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