

# SCIENTIFIC REALISM AND THE GOD'S EYE POINT OF VIEW

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**Abstract:** According to scientific realism, the aim of science is to discover the truth about both observable and unobservable aspects of the mind-independent, objective reality, which we inhabit. It has been objected by Putnam and others that such a metaphysically realist position presupposes a God's Eye point of view, of which no coherent sense can be made. In this paper, I will argue for two claims. First, scientific realism does not require the adoption of a God's Eye point of view. Instead, scientific realism is a hypothesis about the relationship between scientific theory and reality which may be proposed from within our human perspective. Second, even if scientific realism did require a God's Eye point of view, this would not necessarily be to the detriment of realism. For it is possible to develop an intelligible external perspective on human epistemic relations to our enviroing reality.

## I. Introduction

Hilary Putnam once claimed that the position he referred to as metaphysical realism presupposes a God's Eye point of view. That is, it presupposes that we are able to remove ourselves from our human perspective and survey the world as it really is from the point of view of an omniscient being. But it is impossible to remove ourselves from our human perspective in the way that metaphysical realism requires. So, Putnam argues, metaphysical realism is an unsustainable position.

With some minor qualifications, which I will note below, I take scientific realism to be a form of metaphysical realism. Hence, I will tend to use the terms 'realism' and 'scientific realism' interchangeably. According to scientific realism, as I understand it, scientific inquiry leads to knowledge of the truth about observable and unobservable aspects of a mind-independent, objective reality. The scientific realist's commitment to a mind-independent reality qualifies scientific realism

as a form of metaphysical realism. Because scientific realism is a form of metaphysical realism, the problem of the God's Eye view must also arise as a problem for the scientific realist.

My aim in this paper is to defend scientific realism against the Putnam-style objection that it incoherently requires a God's Eye point of view. In particular, I seek to establish two points. First, scientific realism does not (incoherently) presuppose a God's Eye point of view. Second, even if scientific realism did presuppose a God's Eye point of view, this would provide no basis on which to object to scientific realism.

## **II. Putnam on the God's Eye point of view**

The idea that realism requires a God's Eye point of view is found in chapter three of *Reason, Truth and History*, where Putnam rejects metaphysical realism in favour of internal realism.<sup>1</sup> Putnam characterizes metaphysical realism in the following terms:

On this perspective [i.e., the perspective of metaphysical realism], the world consists of some fixed totality of mind-independent objects. There is exactly one true and complete description of 'the way the world is'. Truth involves some sort of correspondence relation between words or thought-signs and external things and sets of things. I shall call this perspective the *externalist* perspective, because its favorite point of view is a God's Eye point of view. (Putnam, 1981, p. 49)

Following this passage, Putnam goes on to characterize the internal realist perspective that he favoured at that stage in his philosophical development. He then comments that:

There is no God's Eye point of view that we can know or usefully imagine; there are only the various points of view of actual persons reflecting various interests and purposes that their descriptions and theories subserve. (Putnam, 1981, p. 50)

Given that there is no God's Eye view available to us, metaphysical realism is not a position that can be justifiably adopted. For to adopt metaphysical realism would require us to occupy the standpoint of God, which is impossible for us.

The internal realist position that Putnam proposes in *Reason, Truth and History* involves a conception of truth that reflects Putnam's rejection of the God's Eye perspective. The central tenet of internal realism is that truth is an "idealization of rational acceptability" (1981, p. 55). Truth is what would arise if scientific inquiry were pursued to the ideal limit of inquiry.<sup>2</sup> It is "some sort of ideal coherence of our beliefs with each other and with our experiences *as those experiences are themselves represented in our belief system*" (1981, pp. 49-50).

The internal realist conception of truth is therefore an epistemic conception of truth. As such, it contrasts with the metaphysical realist view of truth, according to which truth is a non-epistemic relation of correspondence between language and reality (1981, p. 55). The internalist's epistemic conception of truth is therefore a repudiation of the God's Eye point of view. For the internalist denies that truth may be conceived as independent of either observer or conceptual scheme, as required by the metaphysical realist's God's Eye view of truth.

In sum, I take the thrust of Putnam's comments about the God's Eye point of view to be twofold. On the one hand, realism requires a God's Eye point of view in order to be stated or defended. On the other hand, it is impossible for us to adopt a God's Eye point of view. So realism is incoherent. For it is not possible for us to occupy the standpoint that we would need to occupy in order to be able to formulate or to defend the position.

### III. Metaphysical realism and scientific realism

The specific target of Putnam's God's Eye objection is the position of metaphysical realism rather than scientific realism, as such. Still, I understand scientific realism to be a form of metaphysical realism. Thus, while I have a number of reservations about Putnam's characterization of metaphysical realism, I take the God's Eye objection to apply to scientific realism as a special case of metaphysical realism. Before further elaborating upon the nature of scientific realism, let me briefly indicate the sort of qualifications that I believe need to be made about Putnam's characterization of metaphysical realism.

In the first place, it is not clear that the realist need be committed to the existence of "one true and complete description of 'the way the world is'", as Putnam suggests in the passage quoted above. To avoid relativism about truth or reality, it must of course be denied that there is more than one true and complete description of the world.<sup>3</sup> But the core commitment of metaphysical realism is to the existence of an objective reality whose existence, properties and structure are independent of human mental activity. It is an open question whether there need be even as many as one true and complete description of such a reality. Indeed, it is an open question whether any coherent sense can be made of the idea of such a description.<sup>4</sup>

In the second place, it is not clear that the realist need be committed to the view that "the world consists of some fixed totality of mind-independent objects". For, as Alan Musgrave has pointed out in discussion of Putnam, the word 'object' is not an individuating or sortal expression (2001, p. 41). The question of how many objects exist is not, therefore, a well-formed question. Such a question has no answer unless a specification is given of what kind of object one has in mind. But this means that the claim that the world consists of a *fixed totality* of objects is not one to which any

clear significance may be attached. While the realist might be committed to the existence of a fixed totality of some *specific kind(s)* of objects, there is no need – nor does it make any sense – for the realist to be committed to a general claim that there is a fixed totality of objects.

But let me set such reservations about Putnam’s characterization of metaphysical realism to one side. I will now briefly present the position of scientific realism as I understand it.<sup>5</sup> I characterize scientific realism by means of six core principles:

1. *Aim realism*: the aim of science is to discover the truth about the world, and progress in science consists in progress toward that aim.
2. *Theoretical discourse realism*: scientific discourse about theoretical entities is to be interpreted in literal fashion as discourse which purports to be about real unobservable entities.
3. *Metaphysical realism*: the world investigated by science is an objective reality which exists independently of human thought.
4. *Correspondence theory of truth*: truth consists in correspondence between a claim about the world and the way the world is.
5. *Objectivity of truth*: truth is objective in the sense that the truth-value of a claim is determined by the way things stand in the objective world, whether or not we believe that it is true.
6. *Epistemic realism*: scientific inquiry leads to genuine knowledge of the objective world.

My characterization of scientific realism departs from Putnam’s metaphysical realism in a number of key respects. But I do not think that it does so in a way that would render it immune to Putnam’s worry about the God’s Eye view. For on my characterization of scientific realism, realism is committed to a non-epistemic conception of truth as correspondence to an objective, mind-independent reality. Such a conception of truth is surely the key constitutive component of metaphysical realism in the sense defined by Putnam. Thus, apart from the minor qualifications

mentioned above, scientific realism in my sense is similar in spirit to metaphysical realism in Putnam's sense.

#### **IV. Does scientific realism require a God's Eye point of view?**

With a statement of scientific realism before us, let us now consider whether it requires a God's Eye point of view.

It may immediately be conceded that it is impossible for us to remove ourselves from our human perspective and adopt a God's Eye point of view. We are unable to survey the world from the vantage point of an all-knowing supreme being. But neither does the doctrine of scientific realism require that we adopt such a viewpoint.

The realist who proposes a scientific realist interpretation of science does not thereby purport to occupy a God's Eye perspective. Rather, in proposing such an interpretation of science the scientific realist puts forward a hypothesis about the nature of science and the relation between science and reality. In particular, the realist claims that science is an activity, the aim of which is to discover the truth about observable and unobservable dimensions of a mind-independent, objective reality. But such a claim is not made from a God's Eye point of view. It is a hypothesis that the realist proposes from within our human perspective as an interpretation of a specific human activity, the activity we call science.

Now, it would be perfectly consistent for the scientific realist to refrain from any positive epistemic commitment to the truth or progressiveness of science. A sceptically minded realist might adopt a restricted position about the aim of science and the interpretation of theoretical discourse, but suspend judgement on the question of whether any actual progress has been made toward the

scientific aim of truth. In effect, such a restricted version of scientific realism would amount to asserting the first five principles of scientific realism, but suspending the sixth principle, the principle of epistemic realism.

But realists typically do not adopt such a sceptical attitude toward science. They typically support a stronger epistemic thesis to the effect that science has made progress toward the truth, and, in so doing, has produced genuine knowledge about the objective world. Realists typically combine the realist interpretation of science with the additional claim that a realist interpretation of science provides the best explanation of the success of science. In particular, realists typically assert that the truth or approximate truth of scientific theories, together with the successful reference of theoretical terms, is responsible for the much vaunted empirical success of the sciences. Given this, realists conclude, the hypothesis of scientific realism should be accepted as an accurate portrayal of the relation between science and reality.<sup>6</sup>

But such a hypothesis about the relation between science and reality makes no evident use of a God's Eye point of view. Quite the contrary, it is a hypothesis proposed from *within* our human perspective about the relation between science and reality. So far from laying any claim to omniscience, or direct access to reality, the realist claims that scientific realism provides the best explanation of a robust phenomenon that stands in need of explanation, namely, the empirical success of the sciences. So far from presupposing a God's Eye perspective, the argument is designed to persuade fellow occupants of our human perspective that a realist account of science provides the best account of the epistemic and semantic relations between the human activity of science and the largely non-human world that we inhabit.

It is worth remarking that the strategy I have just sketched of arguing that realism is a hypothesis which is to be accepted because it provides the best explanation of the success of science reflects a broadly naturalistic conception of realism in the philosophy of science. For to treat realism as a hypothesis about science, and to argue for the hypothesis of realism by means of inference to best explanation, is to treat realism as a hypothesis that is to be evaluated in a manner analogous to the evaluation of scientific hypotheses. As such, my claim that realism does not require a God's Eye point of view derives from a naturalistic attitude toward the position of realism.<sup>7</sup>

Of course, it might be objected that realism is not the best explanation of the success of science. Instead, it might be maintained that there is a non-realist interpretation of science that provides a better explanation of the success of science than realism does. Or else it might simply be held that realism is to be rejected as an inadequate explanation, since truth and reference are not the invariable correlate of scientific success.

But such objections would be beside the point. For the point at issue is not whether realism provides the best explanation of the success of science, or, indeed, whether realism is true. Rather, the point at issue is whether the realist must adopt a God's Eye point of view in proposing the realist hypothesis about the relation between science and reality. It might very well be the case that realism fails to be the best explanation, or is in fact an unsatisfactory explanation, of the success of science. But neither point has any bearing upon the issue of whether the realist must adopt a God's Eye point of view in order to propose a realist interpretation of science.

## **V. Is there a coherent God's Eye point of view?**



So far, I have sought to show that scientific realism does not require a God's Eye point of view. As such, it does not fall prey to Putnam's objection that realism incoherently assumes a God's Eye point of view. I now wish to change tack and argue in the opposite direction. I will argue that, even if realism did appear to require the adoption of a God's Eye point of view, this would not necessarily be to the detriment of realism. For coherent sense may be made of an external viewpoint suitable for realist purposes, which does not require us to adopt the perspective of an infallible, omniscient deity. I shall approach the issue from the perspective of a naturalized epistemology set within a realist framework. My point of departure will be the question of animal knowledge.

Recent work in cognitive ethology on the nature of animal minds is increasingly attracting attention amongst philosophers.<sup>8</sup> Much of the interest revolves around questions in the philosophy of mind of whether non-human animals have minds in anything like the sense in which humans have minds. Considerable attention has also been focused on the ethical dimensions of our relations to other animals, since at least some non-human animals may be capable of a mental life in ways that have moral significance.

But the question of most immediate relevance relates to the epistemological significance of animal minds. Assuming that some animals may have minds, could the mental states of animals be epistemic states? Can animals other than us have knowledge?

In his recent book, *Knowledge and its Place in Nature* (2002), Hilary Kornblith presents a thoroughly naturalistic account of knowledge. Rather than analyze the concept of knowledge in the manner of traditional analytic epistemology, Kornblith proposes that epistemologists should treat knowledge as a natural kind which may be investigated by empirical means. But, if knowledge is a naturally occurring phenomenon, as this suggests, then the possibility arises that the natural kind,

knowledge, may be instantiated in beings other than humans. It therefore becomes an open question, subject to empirical investigation, whether animals other than ourselves are capable of knowledge, and what the nature of such knowledge might be.

Naturalistic philosophers, such as Kornblith, are often inclined to see continuities between humans and other animals. This raises a host of challenging philosophical questions. But, rather than explore any of these questions, I wish to focus on the implications of naturalism for the God's Eye objection. In particular, I wish to suggest that for philosophers who work from a naturalistic perspective, the problem of the God's Eye point of view poses less of a threat than might at first appear to be the case.

I will illustrate the point by means of one of the examples that Kornblith presents in *Knowledge and its Place in Nature*.<sup>9</sup> Kornblith discusses the work of Carolyn Ristau on the piping plover.<sup>10</sup> The piping plover is a shorebird found on the coast of eastern North America. Like a number of other plovers, such as the Killdeer, it employs deceptive, "injury-feigning", behaviour in order to protect its young. When a human or other potential threat or predator approaches the nest, the adult plover attracts the intruder's attention by pretending to have a broken wing and moving away from the nest. Once the intruder has been led well away from the young, the plover flies off, leaving the intruder at some distance from the nest where it poses no immediate threat to the young birds.

As Kornblith points out, Ristau employs an epistemic idiom to describe the behaviour of the plover.<sup>11</sup> The plover has knowledge of its environment. It knows whether an intruder poses a threat and it can determine whether an intruder is looking in the direction of the nest. It can discriminate between a person who has posed no threat in the past and one who has previously behaved in a

dangerous manner. As the plover leads the intruder away from its nest, it continues to track the movements and position of the intruder, as well as to be aware of the location of its young, to insure that the intruder is led away from the young.

All of this suggests that piping plover distraction behaviour involves epistemic states on the basis of which the plover is able to behave in such a way as to lead intruders away from its young. Kornblith notes that Ristau does not herself argue for the attribution of knowledge, rather than true belief, though she defends attribution of intentional states at some length (2002, p. 55).<sup>12</sup> But it is not essential for present purposes to establish the legitimacy of knowledge attribution to the plover, as opposed to some weaker epistemic state. Instead, it suffices to reflect upon the standpoint of the researcher who conducts a study of the plover's behaviour, and who proposes an explanation of this behaviour in terms of mental states of the plover and their relation to its environment.

Such reflection will return us to the question of whether it may be possible to coherently adopt a God's Eye point of view. For I wish to suggest that work such as Ristau's on the piping plover illustrates how one might adopt an external point of view that is not dissimilar to the God's Eye point of view that Putnam claims to be beyond reach. To see this, let us consider what of philosophical significance might emerge from Ristau's studies of the piping plover's mental states and their relation to its environment. Such empirical studies will ultimately provide the basis for an epistemological analysis of the cognitive states and associated behaviour of the piping plover.<sup>13</sup>

The results of such an epistemological analysis will take the form of claims about how the plover acquires knowledge of its environment, integrates new knowledge with prior knowledge, and utilizes such knowledge as the basis for action. For example, the plover may detect and monitor the approach of an intruder using its eyes. On the basis of such input, the plover determines an

appropriate trajectory by which it can lead the intruder away from its young. While doing so, it continues to monitor the movements of the intruder, while keeping track of the location of its young. Based on this information, the plover may adjust direction to insure the intruder moves away from the young.<sup>14</sup>

It would be fair to describe the outcome of such an analysis as an epistemology of the piping plover. In order to produce such an epistemology we need to occupy a vantage point external to that of the plover itself. Yet it seems entirely possible to describe the plover's epistemic situation from a perspective outside of the plover's own point of view.

This has interesting implications for our own case. For there is no apparent reason why we should be unable to carry out an epistemological analysis of the kind just described for the plover with respect to ourselves. To do so, we might proceed in a manner not unlike Ristau's investigation of the piping plover. We can determine how humans acquire knowledge about their environment by means of their senses and reasoning processes. We can explore the reliability and limits of our senses and reasoning by means of the scientific study of perception and inference. By investigating the relation between human knowledge and behaviour, we can explain how our knowledge enables us to successfully negotiate our environment.

In thus developing an epistemological model of ourselves, it is true that we must turn our gaze upon ourselves. We must regard ourselves from our own point of view. But it is not clear why the ability we have to carry out an epistemological analysis of the plover should suddenly desert us when we attempt such an epistemological analysis of ourselves. There seems no reason in principle why we should be unable to conduct an empirical investigation of our own epistemic capacities in a manner analogous to that employed in the case of the piping plover.

But, if this is so, then it seems clear that we are able to adopt a viewpoint external to ourselves. For we may conduct an epistemological study of humans on the basis of which we are able to explain how human epistemic states give rise to successful interactions with our environment. In so doing, we adopt the perspective of an external observer of our own human epistemic situation. From within such a perspective, we are able to propose an epistemological model of the relation between human thought and our surrounding environment. Such a model may, of course, be prone to error, and is anything but certain. However, this does not show that it is impossible to adopt such a perspective. It only shows that the result of adopting such a perspective need not be an infallible view of the world.

Perhaps, in the end, this is all that Putnam's claim comes to. We are unable to adopt a point of view from which to gain infallible insight into the way of the world. So we cannot adopt a God's Eye point of view. For, while we may take up an external vantage point with respect to our own epistemic situation, we do not know everything and we may be mistaken. But this should be no surprise to anyone. After all, we are not God.

## **VI. Conclusion**

I will conclude by summarizing the points I have made. First, I have argued that scientific realism is a hypothesis about the relation between scientific inquiry and reality, which is put forward from within our human perspective. As such, scientific realism does not incoherently presuppose a God's Eye point of view. However, second, it is not in any event clear that scientific realism would be in any way undermined if it did presuppose a God's Eye point of view. As we have just seen, there is a perfectly intelligible external perspective that is familiar from naturalized epistemology and recent

research on animal cognition. While this external perspective may fall short of being a God's Eye perspective, it seems clear that realism would be none the worse were it to adopt such a perspective.

## Endnotes

1. As it is now more than twenty years since the publication of *Reason, Truth and History*, and Putnam has long since moved on from the internal realism he then advocated, the topic of the God's Eye point of view may seem somewhat dated. However, the problem of the God's Eye point of view has caught hold amongst some philosophers. Two recent authors, Marsonet (2002) and Tetens (forthcoming), write as if the problem of the God's Eye point of view exposes a serious shortcoming in the realist position. It is because I disagree with authors such as Marsonet and Tetens on this score that I have been prompted to offer my response to the problem in this paper.
2. Cf. Putnam (1978, p. 125), where Putnam notes that metaphysical realism treats truth as 'radically non-epistemic', which implies that the ideal theory reached at the ultimate end of scientific inquiry might be false. Though Putnam does not, in so many words, assert that the ideal theory is true, this is the clear implication of his internal realist identification of truth with ideal rational justification.
3. More precisely, to avoid relativism, it must be denied that there may be true and complete descriptions of the world which are jointly inconsistent with each other. In principle, it might be possible to formulate alternative true and complete descriptions on the basis of alternative conceptual schemes. Provided that such descriptions are consistent with each other, no threat of relativism arises. (I owe this point to Michael Devitt.)
4. For sustained criticism of the idea of a complete description of the 'way the world is', see Hacking (1983, pp. 93-5).
5. In my (2000), I characterize scientific realism by means of five core principles. However, these five principles fail to include the epistemic realist thesis that science yields genuine knowledge of an objective reality. Hence, in my (2001) I have modified my characterization of scientific realism by adding a sixth principle of epistemic realism. I employ the latter characterization of scientific realism here.
6. What I have just described, of course, is the well-known success argument for scientific realism. As it happens, I regard the success argument as only one part of the case to be made for scientific realism. For more on this, see my (2001).
7. A related treatment of the issue may be found in Devitt (1991, section 12.6). I am grateful to Michael Devitt for drawing my attention to this point, and for prompting me to explicitly note the naturalistic provenance of my argument in this section. As will be seen in the next section, this same naturalistic approach may also be used to defuse the threat of an appeal to the God's Eye point of view.
8. See, for example, the articles contained in Bekoff and Jamieson (1996).
9. See also Kornblith (1999).

10. See, for example, Ristau (1991).
11. See Kornblith (2002, p. 53). See, also, Ristau (1991, e.g., pp. 96, 123).
12. However, Kornblith goes on to argue for the appropriateness of full-blown knowledge attribution. In brief, he argues that “knowledge ... first enters our theoretical picture at the level of understanding of the species, rather than the individual” (2002, p. 57). While the behaviour of a specific individual may be explained on the basis of intentional states other than knowledge, at the level of species it must be explained how “members of the species are endowed with a cognitive capacity that allows them successfully to negotiate their environment” (p. 57). Kornblith argues that explanation of the role of adapted cognitive mechanisms in the generation of successful action on the part of an animal requires the attribution of knowledge.
13. Such an analysis of the plover would have much in common with the kind of psychologically embedded epistemology that Quine describes in his (1969, pp.82-3).
14. The possibilities for epistemological analysis do not stop here. For example, it might further be shown that plovers acquire knowledge in a variety of different ways (e.g., non-visual sensory modalities) or that such knowledge is subject to certain limitations (e.g., due to eye placement or lack of night vision).



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