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GOODMAN AND PUTNAM ON THE MAKING OF WORLDS

ABSTRACT. Hilary Putnam and Nelson Goodman are two of the twentieth century's most persuasive critics of metaphysical realism, however they disagree about the consequences of rejecting metaphysical realism. Goodman defended a view he called "irrealism" in which minds literally make worlds, and Putnam has sought to find a middle path between metaphysical realism and irrealism. I argue that Putnam's middle path turns out to be very elusive and defend a dichotomy between metaphysical realism and irrealism.

I

Nelson Goodman and Hilary Putnam are two of the twentieth century's most persuasive critics of metaphysical realism. They both criticise the intelligibility of the metaphysical realist's picture of the world: something Putnam calls a "God's Eye View" of the world and Goodman described as faith in a "ready-made" world.¹ There are three essential features of the metaphysical realist view rejected by Putnam and Goodman. One is a belief in the determinacy of the world: a belief that there is exactly one way that the world is. As Putnam characteristically expresses the idea, there is but one reality and it consists of exactly one fixed set of objects, each possessing exactly one set of properties and standing in exactly one set of relations to other objects.² The second essential feature of the metaphysical realist view emphasises the mind-independence of the world. With certain local exceptions, the

world's character is independent of human minds – our will, desire, belief and general cognitive capacity. The third, closely related, feature of metaphysical realism expresses the non-epistemic character of certain truths. It is a belief that there is an important class of propositions – one might call them world-descriptive propositions – whose truth-values are independent of human epistemic capacity. The truth of such propositions may well outrun all possibility of justification. There are many possible variations upon the basic theme, but these three theses capture the essence of the metaphysical realist view.

Metaphysical realism is a very general thesis about world and our cognitive relation to it. As such, it contrasts with various other realist and antirealist theses, and debate about it exhibits complicated relations to other realist debates. For instance, metaphysical realism is silent about the realist status of specific discourses. A metaphysical realist may be a moral realist or a moral antirealist; a realist about time or a presentist; a scientific realist or a sceptic about the claims of science.

Metaphysical realism is a very general metaphysical doctrine rather than a general logico-semantic one, however this has not always been clearly recognised. For instance, Putnam has, on occasion, saddled the metaphysical realist with commitment to a correspondence theory of truth, which is a logico-semantic claim.³ While Putnam fairly represents the view of many metaphysical realists in this, he mischaracterises the essence of metaphysical realism. What is essential to metaphysical realism is a belief in the non-epistemic character of certain *truths*, not an overarching theory about the nature of truth or the semantics of the truth-predicate. On the face of it, for instance, metaphysical realism is compatible with deflationary views of truth.⁴

Putnam also attributes to the metaphysical realist a view about the existence of a *theory*: the view that there is one true and complete theory of the world.⁵ In this,

however, Putnam captures something deep and important in metaphysical realism. The point of metaphysical realism is not to characterise mind-world interactions implicit in actual discourse, but to characterise very general features of the world and our cognitive relation to it. We need to give some content to this very general characterisation, one that describes metaphysical realism rather than any particular metaphysics, and this is provided by the notion of a complete theory or specification of the world. Such a description may not be accessible to us, even in principle, but the metaphysical realist is in some way committed to its reality.⁶ In criticising the very idea of such a thing, Putnam got to the heart of the metaphysical realist picture, which is why his critique of the very idea of a true and final theory of the world marked an important philosophical moment.⁷

Putnam and Goodman both agree in their rejection of metaphysical realism, but their two views diverge on the consequences of this rejection.⁸ Goodman saw no alternative but to embrace a position he called “irrealism”.⁹ According to Goodman, worlds are made, not found. One way into Goodman’s thinking on the matter is to begin with the observation that distinct symbolic systems produce descriptions – or versions of things – that sometimes conflict with each other. On one description of things, for instance, the earth stands still while the heavens move around us. On another, the earth turns on its axis and revolves around the sun. On yet another, it dances the role of Petrouchka.¹⁰ Does the earth really move? Does it really move one way rather than another? According to Goodman, the one description is not more true than the others. Of course, not all descriptions come readily to hand: an astronomical description of the earth dancing Petrouchka would be impossible for us to develop beyond the merest sketch and would hardly have a point in any case (as Goodman puts it “not even a fly is likely to take one of its wing-tips as a fixed point”).¹¹

Conflicting descriptions are not all on a par, but the conflict between them ought not resolved, claims Goodman, by singling out one truth and consigning all descriptions in conflict with it to falsehood. If Goodman is right about this, we are left with an awkward puzzle. Goodman describes the puzzle and sketches his resolution of it like this:

“How, then, are we to accommodate conflicting truths without sacrificing the difference between truth and falsity? Perhaps by treating these versions as true in different worlds. Versions not applying in the same world no longer conflict; contradiction is avoided by segregation. A true version is true in some worlds, a false version in none. Thus multiple worlds of conflicting true versions are actual worlds, not the merely possible worlds or nonworlds of false versions. So if there is any actual world, there are many.”¹²

This is not an attempt to argue that we make worlds merely on the assumption of pluralism about world versions. A crucial premise of Goodman’s argument is that distinct versions are, or can be, just as they appear: contradictory. To secure the argument, we therefore require a demonstration that distinct versions really do contradict each other and do not merely appear to do so. I think we can reconstruct the demonstration Goodman probably had in mind on the basis of his oft-repeated denial of the intelligibility of a ready-made world.

To say, for example, both that the earth moves and that it does not move appears to commit oneself to a contradiction. The natural temptation, of course, is to claim that this merely reflects a hidden ambiguity in our use of the term ‘moves’. One

ought to say, perhaps, not that the earth both moves and does not move, but that the earth moves relative to one frame of reference and does not move relative to a different frame of reference, thus removing the appearance of contradiction. Goodman is aware of this response, of course, but takes himself to have good reason to resist it. Expressing our two claims about the earth's movement in terms of movement relative to distinct frames of reference dispels the immediate appearance of contradiction: it now looks as if we are making two distinct claims. But are the reinterpreted claims really compatible with each other? Can they be true of the one world? Answering these questions inevitably becomes somewhat convoluted as various possibilities are explored and rejected. Goodman's fundamental commitment, however, is to the idea that all attempts to assert the one-world compatibility of distinct frames of reference, and more generally, distinct descriptive schema and the world versions we construct from them, must rely at some point on the ready-made character of the world.

Here is one way the argument develops. We can make sense of the compatibility of our relativised claims to have the earth both move and stand still if there is a set of facts about the world that the two claims both represent in different ways. These facts are either representation-independent, that is ready-made, or they are themselves products of a descriptive schema (say, basic sentences of some description of the world). If the latter, we have merely generated a three-schema problem. To avoid vicious regress, we either have to accept the idea that distinct frames of reference or descriptive schemas do not describe the one world or accede to the proposition that they describe the one world in virtue of their representing the one set of representation-independent facts in distinct ways. In this way, attempts to resolve the apparent contradiction within a claim that the very same earth both moves and does not move eventually come to depend on the there being a ready-made world:

a world of representation-independent facts. And since Goodman rejects the intelligibility of such a world, he is forced to accept the apparent contradiction between world versions at face value.

If we now accept that descriptive schemas and world versions are the products of human agency, and take it that worlds correspond to at least some world versions, it appears that we have a *prima facie* sense in which one might say that worlds are made. Goodman's worldmaking is a disciplined business. We do not always make worlds when we manipulate symbols. Worldmaking is constrained by coherence, consistency, the fit with intuitive judgement and intelligible purpose and these virtues add up to what Goodman calls the "rightness" of a version. Right versions make worlds, and are produced by many different kinds of people.¹³ Scientists create worlds; philosophers create worlds; artists create worlds; an advertising agency might create a world. World's are the product of any ambitious, successful attempt to create an order of things.

Goodman goes on to allow that sometimes we ought to speak of many worlds and at other times of only the one world. At other times still, says Goodman, we ought to admit that the very idea of a world invites paradox. He recommends that we vacillate between these views.¹⁴ Although Goodman thus makes a casual appeal to a kind of second order pluralism – a pluralism about the value of pluralism – he elsewhere takes the act of worldmaking entirely seriously. Worldmaking is something we really do.¹⁵ And it is quite distinct from an act of describing the one real world.

Putnam strikes out in a very different direction. Although he shares Goodman's descriptive pluralism, he objects to the idea that we make worlds. Most importantly, he denies that worldmaking is a consequence of the rejection of

metaphysical realism.¹⁶ Putnam has been searching for a coherent alternative to both metaphysical realism and Goodman's irrealism ever since he began his famous critique of metaphysical realism. He has described various intermediate positions: "internal realism"; "realism with a human face"; and "natural realism." Although there are important differences between these positions, they all seek a middle path between worldmaking and metaphysical realism. On the one hand, Putnam consistently rejects the idea that we encounter a world ready-made. On the other, he flatly denies that we make or create worlds. "Human minds", he says, "did not create the stars of the mountains, but this 'flat' remark is hardly enough to settle the philosophical question of realism versus antirealism."¹⁷

According to Putnam, therefore, human minds do not create worlds, but nor do they encounter a ready-made world. What are the prospects for this kind of intermediate position? This will depend, in part, on the intelligibility of the corresponding mind-world relation. Let me call such a relation one of *constituting* the world. The non-metaphysical realist alternative to Goodman's irrealism can be described in terms of our constitution of the world, where constitution is neither creation of a world nor description of a ready-made world. (Putnam does not, in fact, use the term in this way. However, it expresses the idea of an appropriate non-metaphysical realist mind-world relation well enough.) On this way of putting matters, human minds do not literally *make* the world. They *constitute* the world, where constituting a world is somehow distinct from creating it, or making it, or *really* bringing it about.

In this paper, I argue that Putnam's claim that there is a middle path between irrealism and metaphysical realism is implausible. I argue that only a metaphysical realist has the conceptual resources to adequately distinguish mere conceptual

engagement with the world from worldmaking. If I am right, this would mean that philosophers opposed to metaphysical realism ought not take comfort in the idea that we constitute rather than create the world. Putnam's third way has proved very elusive; and for good reason. I do not think that we can in the end avoid a dichotomy between some version of metaphysical realism on the one hand, and some version of irrealism on the other.

II

The metaphysical realist has it that we describe the world, more or less well. The irrealist has it that we make versions, the best of which have worlds answering to them. If we are to evade the dichotomy of metaphysical realism and irrealism, we need to articulate an alternative relation between mind and world, one I have called "constitution." Constituting a world must be somehow distinct from the act of making it. What might be the difference be? The obvious way of attempting to draw the distinction is in terms of causation. Creative acts causally produce a created object, whereas acts of constituting an object do not causally produce it. There are numerous accounts of causation in the philosophical literature, among which we ought, for the purposes at hand, remain as neutral as possible. It is tempting, therefore, to hold that the difference between constitution and creation emerges from the fact that creative acts – genuine worldmakings for example – exploit relevant causal facts, whatever these turn out to be, whereas constitutive acts do not. We need to appeal to *relevant* causal facts to make this work because constitutive acts will necessarily involve causal facts too (for instance, they may bring about certain kinds of talk) and these must be distinguished from causal facts implicated in creation.

Consider an example that Goodman exploits: our constitution of the Big Dipper.¹⁸ We might say that we did not create the Big Dipper because we did not cause it to come into being. There are causal facts that a creation of the Big Dipper would have had to exploit (a matter, say, of dragging the stars into position). No true description of our constitution of the Big Dipper makes use of such facts, so we could not be said to have created it. But which facts are we entitled to appeal to here? Notice that it won't do to simply identify the relevant facts with those that exist independently of the way we think and talk about the Big Dipper. This strategy is only available to the metaphysical realist. The reason for this is that the case of the Big Dipper generalises. Causal facts independent of the way we think and talk about the Big Dipper will depend upon other ways we think and talk: the way we describe fundamental cosmological processes, for instance. But here we encounter the problem of distinguishing constitution from creation all over again. Are these cosmological processes constituted or created? If created, then our case for the constitution of the Big Dipper collapses. If constituted, we must appeal to facts that exist independently of our way of doing cosmology. Eventually, we must appeal to facts that are independent of *any* way we think and talk. We do not describe a middle path between worldmaking and metaphysical realism by identifying creation with the exploitation of mind-independent causal facts.

If we still wish to appeal to relevant causal facts to distinguish constitution from creation, we must develop some other criteria of relevance. One possibility is to attempt a physicalist story at this point: restricting relevant causal facts, say, to those described by a completed physics. An appeal to facts described by completed physics can be made without the metaphysical realist presumption that the facts in question are thoroughly mind-independent, so here, perhaps, is a way of drawing the

distinction between constitution and worldmaking without smuggling in a commitment to metaphysical realism. The physicalist strategy appears initially to make sense of our reaction to the Big Dipper example. We did not create the Big Dipper, we are tempted to say, because we had no physical interaction with the Big Dipper. Perhaps, then, we ought to say in general that a thing is created, not constituted, when it is brought about through a *physical* causal chain originating in us.

I do not think that this way of drawing the distinction will suffice, however. Unless we can put more into the distinction than this, our terms ‘creation’ and ‘constitution’ seem to do no more than distinguish styles of creation: creation through physics and creation by other means. Non-physical ways of bringing things about are still ways of bringing things about: conceptual chains, say, originating in us and turning a portion of the northern sky into the Big Dipper. We make the Big Dipper, one would be forced to admit, we just don’t need to use physics to do it. Of course, distinction between physical and non-physical ways of making may be of some practical interest. It is, after all, much easier to think anew about the heavens than to drag stars around. However, I see no reason to draw great philosophical comfort from this. What is needed is an account of *why* the distinction between physical creation and non-physical creation is philosophically significant and how the non-physical creation of a world avoids being a kind of idealism – a making of worlds through the powers of mind. But this is precisely the kind of thing a distinction between constitution and creation was supposed to provide us with. Simply appealing to physical causation therefore begs the question.

There are various other ways of drawing a distinction between causal creation and non-causal constitution. The point at issue, however, is interpretation of the philosophical significance of any such a distinction. Unless one interprets causal

making as real in a sense that non-causal constitution is not, or interprets causal making as involving facts about created objects in ways that non-causal constitution does not, then the distinction appears merely to mark different modes of making: making with the hands, as it were, and making with the mind. The challenge is to see how to make the distinction mark a difference of more significance than this without invoking the resources of a metaphysical realist: mind-independent, ready-made facts about created objects or about their causal origin. The trouble is, however, that these are precisely the kinds of facts to which we must appeal in order to mark the philosophical significance between causal making and non-causal constitution.

Maybe the difference between constitution and creation can be drawn, not in terms of fine-grained facts of causation, but in terms of coarse-grained temporal facts. Before the activity of making a particular a particular object, say a vase, there is no vase; after the vase-making there is. Before the activity of star-mapping, one might insist, the Big Dipper already existed (i.e. all members of the Big Dipper constellation existed in the apparent positions they now occupy). After star-mapping the sky has not changed. We now have a name for part of it, that is all. This is not yet a satisfactory way of putting matters. Putnam, for instance, asks whether we made the Big Dipper and in answer to that question asks another: “All right, we didn’t make it in the way in which a carpenter makes a table, but *did we make it a constellation?*”¹⁸ Putnam’s point is about the nature of the object made. The Big Dipper is not just a collective name for a number of particular stars, it names a particular way of ordering apparent star positions in contrast to other ways of ordering them. Before we thought of this way of ordering the stars, this ordering of the sky did not exist. So before we developed the concept of the Big Dipper, there was no Big Dipper. This does not relieve Goodman of the apparent difficulty, as Putnam is quick to point out, because

we have difficulty running the same line with less obviously artificial kinds. If the Big Dipper doesn't predate our introduction of the "Big Dipper Concept", do the stars themselves predate our development of the concept of a star? Denying this is very awkward because our best astronomical theories have it that stars are sometimes billions of years old, our best theories of ourselves have it that we are rather less than billions of years old, and these two kinds of theory ought to be able to live with each other.

Goodman happily concedes that the stars were around before we thought them up, or more accurately, that there are versions in which the stars come first and there are versions in which our concepts come first, both of which might be right versions of different worlds. None of this, he argues prevents us making the stars. This is how he states his response to the apparent problem:

"How can a version make something that existed only long before the version itself?" Often declaimed as if it were plainly unanswerable and devastating, the question raises no special difficulty. Notice first that parallel questions such as "How can a version make something far away from it?" seem to give us no concern, and so also for simpler commonplaces such as a flat version of a solid object, a black-and-white version of a multicolored object; we do not insist that a version of a green lawn be green, or that a drawing of moving hockey players must move. No principle requires that features imputed to a world be features of the version. Why be disturbed, then, by a present version imputing a past temporal location to an event? ¹⁹

We make a starry past, in part, by making the spatio-temporal order of the past. Since there is no ready-made spatio-temporal order, we make a past by imposing a temporal ordering upon things. We make stars in the remote past, but we shouldn't expect this making to have itself occurred in the remote past. It is a mistake, Goodman reminds us, to confuse features of a world with features of the making of that world. And this, he thinks, goes for temporal location as it goes for other features of the making of worlds.

If Goodman is right about this, then the irrealist has a consistent way of dealing with the making of pre-existing stars. Similarly, the metaphysical realist, by distinguishing the ready-made phenomenon of stars, their relative positions in space-time, and so on, has a consistent way of dealing with the fact that descriptions of things postdate the things they describe. The question is whether there is any middle path between these two options. What we require is a way of making sense of the fact that our talk of stars postdates stars themselves without presupposing that stars are ready-made. It seems to me that the only plausible means of situating stars in the remote past under this restriction is to affirm the truth of certain counterfactual conditionals. Among these will be the proposition that had we been around in the remote past, our cognitive actions would have led us to speak of stars then, just as they do now. Just *how* this conditional could be true without metaphysical realist presuppositions coming in to play is a very good question, but not one that need delay us here. It suffices to simply point out that one cannot draw a distinction between creation and constitution merely on the basis of counterfactuals such as this. A counterfactual of this kind is true of at least some creative acts. Had, for instance, a vase-maker been around in the remote past, working the clay as I work the clay and in conditions matching those in which I work the clay, a vase would have been

produced. And if she worked the same kind of clay in the same kind of way, she would have produced the same kind of vase. Vase-making and star-mapping can both satisfy counterfactuals employed to make sense of the idea that things predate us. If this is the only available non-metaphysical realist way of making good on the claim that stars predate our star-concept, then the mere fact that worldly objects are apt to predate our construction of world versions cannot be used to distinguish creation from constitution.

Putnam suggests, in effect, yet another way of drawing the distinction between creation and constitution.²⁰ We make up the category star and in doing so make possible certain ways of describing the night sky. What we don't do, however, is make it true that, in Putnam's example, *Sirius is a star*. Herein, perhaps, lies the difference between creating and constituting. Sirius's star-status is constituted, not made, because we don't make Sirius a star. But in what sense don't we make this so? If stars are not ready-made objects, then the fact that Sirius falls under the concept star is dependent on our cognitive activity. Putnam's idea is that, having introduced the concept of a star, we have no *control* over the extension of the concept. We could, perhaps, deny that Sirius is a star, but only by significantly altering our star concept. We cannot both introduce the concept of star exactly as we do and have it that Sirius is not a star.

Can this serve to distinguish creation from constitution? I don't think so. Putnam's fundamental observation is surely correct: there is a sense in which we are not responsible for making Sirius a star. But a worldmaker should not expect otherwise. In making the night sky starry we work with the materials at hand. These materials offer us resistance and thus we fail to control all details of the sky's starriness. Our creation of a starry sky is not a like a fantasy had by a perfect

imagination, every detail of which is subject to the will. But this, of course, is just what we usually encounter in the making of things. In making a vase, I do not exercise complete control over the finished vase. My vase, for example, suffers from a slight irregularity of shape. Did I make the vase irregular? In one sense I did and in another sense I did not. The vase's shape depends on my actions. It is not, however, something that I specifically intended and it is not something over which I exercised complete control. I could not make a perfectly regular vase no matter how hard I tried. All human acts of creation are imperfectly controlled. So one cannot draw a distinction between constituting a world and creating it merely by noting our lack of control over the extension of our concepts. If I make the vase with its irregular shape, then why not say that I make the starry sky with *its* irregular shape? Putnam recognises that we do not make the world exactly so, but Goodman recognises this also. What we need is a way of distinguishing the creator's hand working resistant material from non-creative cognitive engagement with the world. And Putnam has failed to articulate exactly this distinction.

Both Goodman and the metaphysical realist accept that the extensions of our concepts are not perfectly within our control, but they offer very different accounts of how this semantic situation comes about. The metaphysical realist appeals to a set of ready-made objects or facts which fix extensions of concepts, either by making beliefs and sentences true or by satisfying other conditions of reference. For Goodman, the fact that the worldly extensions of our concepts are not entirely up to us is an effect of pragmatic constraints on worldmaking. Worldmaking is constrained by coherence, consistency, fit with intuitive judgement and intelligible purpose. Conceptual work aims at 'rightness' and the rightness of a version of things is not up to us. For example, when Europeans first travelled to the southern hemisphere, they faced, at

least implicitly, a conceptual choice: whether to count uniquely southern hemisphere stars as of a kind with stars visible from the northern hemisphere. Had they decided not to, then the extension of the term ‘star’ would have been quite different. But the construction of such a version of things would have been to very little purpose, and would not have made for a right version of things. That it should have failed our conceptual purposes, that it would not have yielded a right version, was not up to European travellers, any more than it is up to us.

The question, then, is whether Putnam’s appeal to the intractability of our determination of what it is that falls under our concepts helps to articulate a middle path between Goodman’s irrealism and metaphysical realism. I don’t see how it can, given that conceptual intractability is common ground between Goodman and the realist and Putnam has not offered an alternative explanation of this phenomenon.

To metaphysical realist eyes, Goodman’s play with starmaking may look thoroughly jejune. It would appear to the metaphysical realist that a quick resort to the use-mention distinction ought to clarify matters in this way. There is a perfectly clear sense in which we make it that “Sirius is a star” is a true sentence: it counterfactually depends upon the cognitive activities of sentence-makers. We make the truth “Sirius is a star”, but we do not thereby make Sirius a star. Making Sirius a star requires that we manufacture a heavenly body, making a true sentence need only involve us in the manufacture of concepts and sentences. Putting the point another way, one might insist that *making a true sentence* is quite a distinct activity from *making a sentence true* and, to metaphysical realist eyes, Goodman simply confuses these two kinds of making. The former is a matter of making a sentence and having the good luck or the skill to make a true one. The latter is a matter of taking a

sentence and working away to somehow make *it* true. Genuine worldmaking requires us to do a great deal of the latter. It does not seem to require any of the former.

While this articulates a disagreement with Goodman's irrealism, however, it hardly counts as a refutation of it. The metaphysical realist response clearly begs the question against irrealism. Recall that Goodman argues for worldmaking from what he takes to be the unintelligibility of a ready-made world. He does not argue for worldmaking by sliding over the use-mention distinction. From his point of view, there is no ready-made Sirius to which we can appeal in distinguishing the act of making true the sentence "Sirius is a star" from the act of really making Sirius a star. We have not the resources, he thinks, to cleanly divide reality into sentence-makers on the one hand and ready-made truthmakers on the other. Thus we simply beg the question against him by insisting that a distinction between use and mention, or between the making of true sentences and the making true of sentences, can be employed to clear up the whole mess. Given that Putnam shares Goodman's rejection of ready-mades, he is right not to take the easy route to a refutation of Goodman. But this leaves him with no very convincing response to the charge that we are worldmakers, only with a profound and well-motivated uneasiness with the very idea that we are.

III

The challenge for philosophers who, like Putnam, search for a way between metaphysical realism and irrealism is to articulate a position that avoids collapse into a version of either metaphysical realism or irrealism. Certainly, the clearest way to avoid thinking of ourselves as worldmakers is to advocate some central theses of metaphysical realism: making appeal to mind-independent causal facts or mind-

independent truthmakers of various kinds. The harder one looks for a genuine alternative, the more its prospects dim. Of course, metaphysical realism is not without its troubles and Putnam in particular has argued forcefully against it. My purpose in this paper, however, is not to defend metaphysical realism from criticism, but to challenge philosophers opposing metaphysical realism to say exactly how it is that we avoid being worldmakers. If metaphysical realists have the conceptual resources to say how we are not worldmakers, it is much less clear that their opponents can turn the same trick. Goodman, I think, was right about one important thing: the dichotomy between metaphysical realism and irrealism is very secure.

NOTES

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- 1 Putnam's well known critique of metaphysical realism is developed in a series of works (1978, 1981, 1983, 1987, 1990). Putnam's current, though still critical, position on metaphysical realism is described in Putnam (1999). Goodman develops his critique of metaphysical realism in Goodman (1972, 1978 and 1987).
- 2 This way of putting the matter can be misleading. The metaphysical realist is not committed to a particular category of ontology (objects, properties, relations), let alone a particular ontology (e.g. space-time points, possible worlds). The metaphysical realist's ontological primitives may include states of affairs, facts, tropes, events, substances, abstract objects, etc.

- 3 Paul Horwich, for example, argues for the compatibility of metaphysical
realism and a deflationary view of truth (1996).
- 4 E.g. Putnam (1981, p. 49).
- 5 This allows Putnam to argue against metaphysical realism by appealing to
conceptual relativity: the idea that there are many equivalent descriptions of
the world (1987, chapter 2). I offer a response to this argument in Cox (1997).
- 6 I describe a way of making sense of the idea of such a theory and a possible
way of avoiding Putnam's critique of it in Cox (1998).
- 7 Putnam no longer rejects all features of the metaphysical realist view. In
particular, Putnam's "natural realism" relinquishes criticism of the possibility
of truth outrunning justification (1996). For instance, the claim that there are
no intelligent aliens is something that he now argues may be true and yet
beyond possible justification. Nonetheless, other features of Putnam's critique
of metaphysical realism remain in place. Putnam still rejects the idea of a true
and final theory of the world, and the concomitant belief in ready-made
objects.
- 8 Putnam endorsed Goodman's critique of metaphysical realism in (1983, pp.
155 – 169). In this review, however, Putnam does not discuss Goodman's
proposals on worldmaking *per se*, restricting himself to an examination of
Goodman's pluralism.
- 9 Goodman's principle papers on worldmaking and irrealism, along with a
number of important responses including those of Putnam and Scheffler, are
brought together in McCormick (1996).
- 10 This is Goodman's example (1978, p. 111).
- 11 Goodman (1978, p. 21).

- 12 Goodman (1987, p. 40).
- 13 Goodman (1987, p. 43).
- 14 Goodman (1987, p. 41).
- 15 In the very same paper in which Goodman mentions the possibility of a second-order pluralism, he also writes ‘...when I say that worlds are made, I mean it literally... Surely we make versions, and right versions make worlds. And, however distinct worlds may be from right versions, making versions is making worlds.’ (1987, p. 42.)
- 16 Putnam (1992, pp. 108 – 133).
- 17 Putnam (1990, p. 30).
- 18 See, for example, Goodman (1996a).
- 19 Goodman (1996b, p. 213).
- 20 Putnam (1992, p. 110). A very similar argument is also developed by Israel Scheffler. See Scheffler (1996a, 1996b, 1996c, and 2001).

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