

# On the Plurality of Worlds

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## Preface

This book defends modal realism: the thesis that the world we are part of is but one of a plurality of worlds, and that we who inhabit this world are only a few out of all the inhabitants of all the worlds.

I begin the first chapter by reviewing the many ways in which systematic philosophy goes more easily if we may presuppose modal realism in our analyses. I take this to be a good reason to think that modal realism is true, just as the utility of set theory in mathematics is a good reason to believe that there are sets. Then I state some tenets of the kind of modal realism I favour.

In the second chapter, I reply to numerous objections. First I consider arguments that modal realism leads to contradiction; and I reply by rejecting some premises that are needed to produce the paradoxes. Then I turn to arguments that modal realism leads to consistent but unwelcome views: inductive scepticism, a disregard for prudence and morality, or a loss of the brute arbitrariness of our world; and again I reply by finding premises to reject. Finally I consider the sheer implausibility of a theory so much at variance with commonsensical ideas about what there is; I take this to be a fair and serious objection, but outweighed by the systematic benefits that acceptance of modal realism brings.

In the third chapter, I consider the prospect that a more credible ontology might yield the same benefits: the programme of ersatz modal realism, in which other worlds are to be replaced by 'abstract' representations thereof. I advance objections against several versions of this programme. I urge that we must distinguish the different versions, since they are subject to different objections; it will not do to dodge trouble by favouring abstract ersatz worlds in the abstract, without giving any definite account of them.

In the fourth and final chapter, I consider the so-called 'problem of trans-world identity'. I divide it into several questions, some of them good

If arbitrary-seeming facts cry out for explanation and no explanation is forthcoming, modal realism may somehow provide solace and remove our stubborn conviction that there *must* be some further explanation, if only we could find it. If so that is all to the good, since that conviction was unreasonable in the first place. But what modal realism cannot do is to provide an explanation of its own, suited to take the place of the missing this-worldly explanation.

The same can be said when the facts about our world seem not so much arbitrary as remarkably lucky. A case can be made that the evolution of life is possible only if the values of the fundamental physical constants and the boundary conditions on the cosmos are exactly right – and lo, they *are* exactly right!<sup>10</sup> Merely arbitrary facts may cry out for explanation, but this remarkable luck cries much more loudly. There are explanations in terms of divine creation or natural teleology to be proposed, of course – and to be resisted as *obscurum per obscurius*. But if these are to be resisted, what can take their place?

A modal realist can appeal to the ‘anthropic principle’: we ought to find it not at all remarkable that the physical constants and boundary conditions turn out to permit the evolution of intelligent life, no matter how exceptional the required values may be. For there are many worlds, with all different values of the constants and boundary conditions. Intelligent life is found only at those of the worlds where the constants and conditions permit it, or where other-worldly laws make it less sensitive to the constants and the conditions. Of course, any inhabitant of a world will find that his world is a habitable one. That is only to be expected. It does not cry out for further explanation.

(You don’t have to be a modal realist to appeal to the anthropic principle. You don’t need genuine other worlds, suitably isolated, as opposed to world-like parts of this world. You don’t need worlds, or world-like parts, that are all the ways they could possibly be; you only need enough variety to make it unremarkable that habitats for intelligent life are included. Sciama speaks of an ‘extreme form’ of the anthropic principle which answers the question why we are here by ‘invoking the existence of all conceivable logically self-consistent universes’ (‘Issues in Cosmology’, page 395). It is this extreme form that modal realism offers. However I cannot advance this as much of a selling point for modal realism, since more moderate forms might do to meet whatever need there is for an anthropic principle in cosmology.)

It’s all very well to invoke the anthropic principle when the remarkable habitability of our world seems to cry out for explanation. But I do not think that this invoking of the anthropic principle is *itself* an explanation. Rather it is a reason why we may be content, if need be, to do without

<sup>10</sup>See *inter alia* Gale, Leslie, and Sciama.

one. It is not an explanation because it gives no information about the causal or nomological ways of our world. It tells us nothing about how any event was caused; it does nothing to subsume laws under still more unified and general laws.

It may be said that an anthropic ‘explanation’ deserves that name because it makes its explanandum less surprising. That it does, to be sure. But that is not what explanations do, or at any rate not always. Explanations give causal or nomological information. That information often does make the explanandum less surprising, but it may make it more surprising, or may leave it about as surprising as before. Suppose you check into a hotel room, and there you find a new-looking pack of cards. They turn out to be ordered neatly: they go from ace to king of clubs, then ace to king of diamonds, then ace to king of hearts, then ace to king of spades. Not surprising – maybe it’s a brand new deck, or maybe whoever left them had won at solitaire. Not so. What’s true is that they got into that order by being well and fairly shuffled. The explanation, if known, would make the explanandum much more surprising than it was before.

## 2.8 The Incredible Stare

I once complained that my modal realism met with many incredulous stares, but few argued objections. (*Counterfactuals*, page 86.) The arguments were soon forthcoming. We have considered several of them. I think they have been adequately countered. They lead at worst to standoffs. The incredulous stares remain. They remain unanswerable. But they remain inconclusive.

Modal realism *does* disagree, to an extreme extent, with firm common sense opinion about what there is. (Or, in the case of some among the incredulous, it disagrees rather with firmly held agnosticism about what there is.) When modal realism tells you – as it does – that there are uncountable infinities of donkeys and protons and puddles and stars, and of planets very like Earth, and of cities very like Melbourne, and of people very like yourself, . . . small wonder if you are reluctant to believe it. And if entry into philosophers’ paradise requires that you do believe it, small wonder if you find the price too high.

I might ask, of course, just what common sense opinion it is with which my modal realism disagrees. Is it the opinion that there do not *actually* exist an uncountable infinity of donkeys? I don’t disagree at all with *that* – to actually exist is to be part of this world, and I dare say that there are only finitely many donkeys among our worldmates. Or is it, simply, the opinion that there do not exist an uncountable infinity of donkeys – with the quantifier wide open, entirely unrestricted, and no ‘actually’ either explicit or tacit in the sentence? *That* opinion I do indeed deny. But if

you ask a spokesman for common sense, out of the blue, which opinion it is that he holds, doubtless he will say that he cannot tell the difference between the two. He thinks actuality is all there is; I disagree. (We have considered this question in section 2.1.) I make a distinction where he makes none. Then who is to say whether his undifferentiated opinion is the one I accept or the one I reject? If it is the former, no worries.

Unfortunately, I think it is both. If he doesn't distinguish the two opinions, he holds both or neither; he certainly doesn't hold neither; so he holds both. So I do have a severe disagreement with him. It is true that I also agree with him, and that he himself cannot distinguish the point of agreement from the point of disagreement. But I can. To the extent that I respect common sense, that's trouble. And I do respect common sense, within limits.

In trying to improve the unity and economy of our total theory by providing resources that will afford analyses, for instance of modality as quantification over worlds, I am trying to accomplish two things that somewhat conflict. I am trying to improve that theory, that is to change it. But I am trying to improve that theory, that is to leave it recognisably the same theory we had before. For it is pointless to build a theory, however nicely systematised it might be, that it would be unreasonable to believe. And a theory cannot earn credence just by its unity and economy. What credence it cannot earn, it must inherit. It is far beyond our power to weave a brand new fabric of adequate theory *ex nihilo*, so we must perforce conserve the one we've got. A worthwhile theory must be credible, and a credible theory must be conservative. It cannot gain, and it cannot deserve, credence if it disagrees with too much of what we thought before. And much of what we thought before was just common sense. Common sense is a settled body of theory – unsystematic folk theory – which at any rate we *do* believe; and I presume that we are reasonable to believe it. (*Most* of it.)

Common sense has no absolute authority in philosophy. It's not that the folk know in their blood what the highfalutin' philosophers may forget. And it's not that common sense speaks with the voice of some infallible faculty of 'intuition'. It's just that theoretical conservatism is the only sensible policy for theorists of limited powers, who are duly modest about what they could accomplish after a fresh start. Part of this conservatism is reluctance to accept theories that fly in the face of common sense. But it's a matter of balance and judgement. Some common sense opinions are firmer than others, so the cost of denying common sense opinion differs from one case to the next. And the costs must be set against the gains. Sometimes common sense may properly be corrected, when the earned credence that is gained by making theory more systematic more than makes up for the inherited credence that is lost. It is not to be demanded that a philosophical theory should agree with anything that

the man on the street would insist on offhand, uninformed and therefore uninfluenced by any theoretical gains to be had by changing his mind. (Especially not if, like many men on the streets nowadays, he would rise to the occasion and wax wildly philosophical at the slightest provocation.) The proper-test, I suggest, is a simple maxim of honesty: never put forward a philosophical theory that you yourself cannot believe in your least philosophical and most commonsensical moments.

The incredulous stare is a gesture meant to say that modal realism fails the test. That is a matter of judgement and, with respect, I disagree. I acknowledge that my denial of common sense opinion is severe, and I think it is entirely right and proper to count that as a serious cost. How serious is serious enough to be decisive? – That is our central question, yet I don't see how anything can be said about it. *I still think the price is right, high as it is.* Modal realism ought to be accepted as true. The theoretical benefits are worth it.

Provided, of course, that they cannot be had for less.