

# *Ontology, Causality and Mind*

*Essays in Honour of D. M. Armstrong*

Edited by

JOHN BACON

KEITH CAMPBELL

LLOYD REINHARDT

*University of Sydney*



**CAMBRIDGE**  
**UNIVERSITY PRESS**

Published by the Press Syndicate of the University of Cambridge  
The Pitt Building, Trumpington Street, Cambridge CB2 1RP  
40 West 20th Street, New York, NY 10011-4211, USA  
10 Stamford Road, Oakleigh, Victoria 3166, Australia

© Cambridge University Press 1993

First published 1993

*Library of Congress Cataloging-in-Publication Data*

Ontology, causality and mind : essays in honour of D.M. Armstrong /  
edited by John Bacon, Keith Campbell, Lloyd Reinhardt.

p. cm.

Includes bibliographical references.

ISBN 0-521-41562-4 (hc)

1. Philosophy. I. Armstrong, D. M. (David Malet), 1926- .  
II. Bacon, John, 1940- . III. Campbell, Keith, 1938- .  
IV. Reinhardt, Lloyd.

B29.069 1993

110—dc20

92-469

CIP

A catalog record for this book is available from the British Library.

ISBN 0-521-41562-4 hardback

Transferred to digital printing 2003

# Contents

	Preface	<i>page</i> vii
	Contributors	xii
I POSSIBILITY AND IDENTITY		
1	Armstrong's New Combinatorialist Theory of Modality	3
	WILLIAM G. LYCAN	
	Reply	18
2	Many, but Almost One	23
	DAVID LEWIS	
	Reply	38
II THE THEORY OF UNIVERSALS		
3	Just Like Quarks? The Status of Repeatables	45
	PETER FORREST	
	Reply	65
4	Sets Are Haecceities	73
	JOHN BIGELOW	
	Reply	96
5	Properties and Predicates	101
	D. H. MELLOR	
	Reply	113
III CAUSALITY AND LAWS OF NATURE		
6	Are Causal Laws Contingent?	121
	EVAN FALES	
	Reply	144
7	Laws of Nature as a Species of Regularities	152
	J. J. C. SMART	
	Reply	169

8	Power for Realists	175
	C. B. MARTIN	
	Reply	186
9	Laws of Nature, Modality and Humean Supervenience	195
	PETER MENZIES	
	Reply	225
IV CONSCIOUSNESS AND SECONDARY QUALITIES		
10	Block's Challenge	235
	FRANK JACKSON	
	Reply	246
11	David Armstrong and Realism about Colour	249
	KEITH CAMPBELL	
	Reply	269
	Bibliography of the Works of D. M. Armstrong	275
	Index	285

# Armstrong's New Combinatorialist Theory of Modality

WILLIAM G. LYCAN

## 1

For over thirty years now, David Armstrong has been defending the doctrine he calls Naturalism, capital N. Naturalism is roughly the view that everything that exists (a) is located in (our) physical spacetime and (b) makes some causal contribution to the spatiotemporal world.<sup>1</sup> In the face of the many apparent counterexamples to that generalization, Armstrong has written a series of books, beginning with *Perception and the Physical World* (1961), attacking the counterexamples one by one.

He started with what I consider the low hurdles, arguing that neither perceptual experience nor sensation (*Bodily Sensations*, 1962) occasions any departure from Naturalism. In *A Materialist Theory of the Mind* (1968), he went on to treat thinking, feeling, and all the rest of the mental, deploying his well-known Causal Analysis of mental concepts – a bigger job, certainly, but well within Armstrong's powers to accomplish. Knowledge and epistemic justification came tumbling after; *Belief, Truth and Knowledge* (1973) spun nicely off Chapters 9 and 10 of its predecessor.<sup>2</sup>

Easy, all too easy. But suddenly the going got tougher: What of *universals*? Since unlike many Naturalists Armstrong scorns what he calls 'Ostrich Nominalism' and firmly believes in properties and other universals, he found himself committed to providing a Naturalistic account of them. That task is at least an order of magnitude or two more taxing than that of Naturalizing just mind and knowledge. It required two volumes (*Universals and Scientific Realism*, vols. 1 and 2, 1978), as well as real metaphysical ingenuity. His theory of universals suggested an account of laws of nature (*What Is a Law of Nature?*, 1983a), even more recon-dite a subject matter because of its modal element, but Armstrong was undaunted.

At that point a lesser philosopher might have rested. (I certainly would have.) The Naturalizing of mind, epistemology, universals and natural law might reasonably be thought an exemplary life's work, entitling the author to a permanent holiday with pay and free champagne. But such

are Armstrong's vision, integrity and energy that he has advanced without pause to the next frontier. His most recent book, *A Combinatorial Theory of Possibility* (1989a)<sup>3</sup> defends Naturalism against what is probably its worst enemy: modality itself. (Not that he has forgotten mathematics and set theory, see below.)

I believe that the Naturalizing of modality is vastly more difficult than were all Armstrong's previous Naturalist efforts combined.<sup>4</sup> In fact, I believe that to provide *any* plausible theory of modality, never mind a Naturalistic one, would be an astounding feat.<sup>5</sup> (And none of the currently fashionable theories, plausible or not, is Naturalistic.)<sup>6</sup> Thus, despite my sympathy for Armstrong's great attempt, I was a priori very pessimistic. And despite my admiration for Armstrong's actual theory, I think a posteriori that it fails. But let us see.

## 2

Armstrong starts with the idea inaugurated by Quine (1969)<sup>7</sup> that Lycan (1979) called 'Combinatorialism' – the idea of treating 'possible worlds' as set-theoretic or otherwise combinatorial rearrangements of whatever are in fact the basic elements of our own actual world. But he faces an obstacle right at the outset: Most combinatorialists help themselves to set theory, because some abstract individuating and ordering device seems clearly required to fund the notion of 'a rearrangement of' the basic elements of this world. That means trouble for Armstrong, since a Naturalist is not entitled to nonphysical items like sets, at least so long as those items remain acausal and nonspatiotemporal.<sup>8</sup>

But following Skyrms (1981), Armstrong gives the Combinatorialist idea a bold Tractarian twist, endorsing the claim that the existence of this possibility or that one is determined by 'the mere existence of' the basic elements involved (p. 37; cf. Wittgenstein's 1922 *Tractatus* 3.4). If that claim is really true, then perhaps Armstrong need not actually produce any set-theoretic or other abstract-object mock-up in order to see 'other possible worlds' as rearrangements of the metaphysical atoms of this world. (Further, he announces that his version of Combinatorialism will display a 'fictionalist element', of which more shortly.) Let us see how this goes.

Armstrong begins with his already defended Tractarian ontology of states of affairs (1978), maintaining that both 'properties' and 'individuals' are only aspects of and abstractions from states of affairs. States of affairs are causal and spatiotemporal, so Naturalism is maintained; Naturalism would be violated only if Armstrong were to permit uninstantiated properties, which he notoriously does not. The world's ultimate

building blocks are the atomic states of affairs, those consisting of a simple individual's having a simple property. As for Wittgenstein, every atomic state of affairs is logically independent of all the others (1989a, p. 41), and in particular, all simple properties and relations are compossible (p. 49).

Now, to the issue: What is a *merely possible* state of affairs? That, as Armstrong says (p. 45), requires a revision of his previous use of the phrase 'state of affairs', since up till now he has used it to mean an actual element of the actual world. He begins with the notion of a false atomic statement. A merely possible state of affairs is what a false atomic statement purports to describe, and is ostensibly referred to by a gerund phrase, as in '*a*'s being *G*'. A nonactual *world* is a conjunctive aggregate of possible states of affairs. Armstrong begins with what he calls 'Wittgenstein worlds' (p. 48), roughly those conjunctive states of affairs that involve all and only the actual basic individuals and properties of our world. In subsequent chapters he provides for contracted worlds that contain fewer individuals or properties, and for expanded worlds containing more individuals, though he argues against 'alien universals'. (There are many other refinements and elaborations, but I think none that will affect my assessment of Armstrong's basic position on mere possibilities.)<sup>9</sup>

What is *combinatorial* about all this is (I presume) that the terms occurring in even a false atomic statement must denote – the subject must denote an actual simple, and the predicate must denote a universal that is actually instantiated by something. Thus if a whole merely possible world is a maximal heap of atomic states of affairs, the heap will be composed of actual individuals and actually instantiated universals merely rearranged, as is both the Combinatorial and the Naturalist way.

Again, it is a *heap* or conjunction, rather than set or any other assembled abstract entity. Armstrong emphasizes that he is not what Lewis (1986a) calls an 'Ersatzer'; he is not proffering a stock of actual entities to simulate or go proxy for 'possibilia'. Rather, he 'treat[s] . . . mere possibilities as non-existents' (p. 46).

A merely possible state of affairs does not exist, subsist or have any sort of being. It is no addition to our ontology. It is 'what is not'. It would not even be right to say that we can *refer* to it, at any rate if reference is taken to be a relation.

'Reference to' mere possibilities has the same linguistic, metaphysical and presumably epistemological status as does ostensible reference to ideal entities in science (ideal gases, frictionless planes, perfect vacuums); at least, Armstrong calls such ideal items '[t]he parallel' by which he officially explains the ontological status of his possibilities.

That is the fictionalist part. It is important to see that Armstrong's fictionalism is no afterthought, but is vital to his project: A given possibility,

an actual or merely possible state of affairs, is a particular, Armstrong argues (p. 52); it is not repeatable within a single world. And the gerund phrase that designates or ostensibly refers to a state of affairs is a singular term, albeit a nominalized sentence. Thus, although there may be some sense in which a particular possibility is determined by 'the mere existence of' the basic elements that figure in it, the possibility is not exhausted by those elements' existing separately or even by their Leonard–Goodman sum. It is rather, according to Armstrong, a unified particular from which the elements are merely 'abstracted'. If we were formalizing Armstrong's ontology, we would need a gerund operator, a singular-term-forming functor applying to name–predicate pairs; *a*'s being *G* would have to be expressed as something like  $B\{a, G\}$ .

Armstrong seems to grant all that (p. 46): 'When we talk about possibilities, we are talking about something represented, not a representation. (An ideal gas is not a representation.)' A possibility is a *thing* represented, but it is not on its face an actual thing. Thus it might seem that Armstrong must Ersatz if he is to save his Actualism; but unhappily, to Ersatz would forfeit Naturalism. The only way to avoid Ersatzing consistently with Actualism and the fact that possibilities are particulars is to insist that the mere possibilities simply do not exist and hence that descriptions of them are fictional.

### 3

Once we understand the semantics and the ontology of ideal entities, we can apply it to our nonactual 'worlds'. But now, what of the semantics and the ontology of fiction?

Armstrong himself says that what we need is 'an Actualist, one-world, account' of fictional statements (pp. 49–50). (Evidently he is assuming that statements about ideal entities in science *are* literally fictional and so would yield to a general semantics of fiction. This assumption is plausible, but notice that we need not accept it; some other treatment of ideal entities might be preferable, and then we would have the choice of which treatment to extend to the merely possible worlds.)

Ideal scientific entities have a relevant noteworthy feature: There is some inclination to say that statements about them are literally true, not literally false though true-in-fiction. Armstrong shares that inclination,<sup>10</sup> which could be gratified if we were to understand the relevant statements counterfactually – namely, as prefaced by 'If there were any . . .' ('If there were any perfect vacuum, light would travel through it [in such-and-such a manner]'). But to extend *that* treatment of ideal entities to nonactual worlds would be to revert to the tactic of paraphrasing statements about

possibilia in counterfactual terms. 'There might have been a golden mountain' would be explicated in the usual way as 'Some possible world contains a golden mountain', which in turn would be understood as fictionally asserting the existence of maximal conjunctive states of affairs that realize, *inter alia*, a mountain made of gold. Since (I presume) this fiction would be a true one by Armstrong's lights,<sup>11</sup> the counterfactual treatment of ideal entities would paraphrase it as something like (A) 'If there were any array of possible worlds (i.e., any array of maximal conjunctive states of affairs besides the actual one that fit the Leibnizian picture of logical space), there would be one that realized a golden mountain'.

(A) is hard to process and probably genuinely hard to understand. (Does the antecedent express the anti-Naturalistic and perhaps Meinongian supposition that there are after all many *worlds* besides our own actual one?) But even if we understand what (A) says, we shall have further trouble computing its truth-value; I do not know how to tell what would be the case 'if Meinongianism were correct', though perhaps the Meinongian *picture* is clear enough to warrant the inference that there would be a nonactual world containing a golden mountain.

In any case, there are deeper objections to explicating ordinary modal statements in counterfactual terms.<sup>12</sup> First, although we seem to understand counterfactuals in ordinary conversation, they have proved to be among the most troublesome and elusive expressions there are. Their truth conditions have remained genuinely mysterious; in philosophical or linguistic discussion of counterfactuals, people blank out or disagree even over simple data. Counterfactuals are not good ontology for purposes of serious, back-to-the-wall philosophizing.<sup>13</sup>

The past twenty-five years have seen great progress in the general understanding of counterfactuals, beginning with Stalnaker (1968) and Lewis (1973). But that progress has resulted precisely from the considered and well-motivated use of possible-worlds semantics. Therefore we have overwhelmingly strong reason to explicate counterfactuals in terms of possible worlds; and any such reason is *eo ipso* reason not to paraphrase talk of possible worlds in terms of unexplicated counterfactuals. The upshot is that although the counterfactual view of truths about ideal entities may be fine for Armstrong's standard scientific examples, it will not do if carried over to possibilia.

[Notice two further points about ideal entities. First: Whether or not we think of truths about ideal entities as being *paraphrasable by* counterfactuals, we may agree that scientific talk of ideal entities *licences* the same counterfactuals. Thus, any obscurity or weirdness in counterfactuals like (A) embarrasses Armstrong's analogy. Second: Scientific idealization is often justified on the grounds that empirical consequences are

unaffected. That too is a counterfactual matter; the idea is that empirical predictions are just (or approximately) as they would be if the idealizations held in fact, and that is why the idealizations are permitted. On Armstrong's analogy, then, it should turn out that empirical predictions are just (or approximately) as they would be if there really were worlds other than our own. But what sense could Armstrong, or we, make of that claim?]

## 4

Some philosophers have resisted the aforementioned inclination and held that, as things are, physics is just plain *false* so far as it does commit itself to ideal entities. (They may add that reference to ideal entities is in principle eliminable from physics, so that physics can in principle be stated in such a way as to make it, and not just its empirical consequences, true.)<sup>14</sup> Such a treatment would never do for Armstrong's purpose, for he wants everyday modal statements, at least, to come out literally true. He needs at least some sense in which possible-worlds statements are true, even though there is a more robust sense in which they are false.

Perhaps there are better ways than the counterfactual way of understanding truths stated in terms of ideal entities as literal, but none has come to me. Let us then, after all, stay with the idea of fictional truth. The obvious compromise (as between the counterfactual view of truths about ideal items and simply rejecting the notion of truths about ideal items), is to say that a modal statement is literally true if and only if the corresponding possible-worlds statement is fictionally-true, even though the statement itself is not literally true. And my impression is that Armstrong would endorse that compromise.

We must then give the Actualist semantics of fictional-truth itself. But as Armstrong plainly recognizes (p. 49), standard possible-worlds accounts of fictional truth are forbidden him. Nor, of course, can he turn to Meinongian accounts such as Castañeda's (1989). He must leave the mainstream and seek elsewhere.<sup>15</sup>

Before surveying the prospects for the semantics of fiction, I want to mention a remaining troublesome feature of ideal entities in science: typically they are degenerate or otherwise special cases of what would otherwise be real physical entities, where an important magnitude takes an impossible value (often 0). That is, they are limiting cases, which is why we have so little trouble understanding the idealized language. (It also encourages the counterfactual analysis of ideal entities.) But Armstrong's merely possible worlds do not have this feature; they are not ideal limiting cases smoothly continuous with real physical objects. This too suggests

that the analogy is not very helpful and that Armstrong would do better to stick by a fictionalist account less strictly tied to the foibles of ideal scientific items.

## 5

What worldless fictional semantics shall he choose, then? Armstrong is offhand (p. 50): 'I do not know in detail what account to give, but it would be truly surprising if no such satisfying account were available'. And that, it seems, is that.

How can Armstrong thus shrug off what seems clearly to be the biggest problem facing his theory of modality? I offer a psychobiographical conjecture, inviting him to confirm or reject it at his leisure. It is supported by nothing in Armstrong (1989a), but is suggested by some passages in his previous works (e.g. 1973) and encouraged by any number of conversations. Here is the conjecture: For Armstrong, Naturalism is not a regulative ideal, or a distant goal to be achieved (if ever) only by overcoming terrible obstacles, requiring ingenuity, great skill, and the grace of one's muse. For him Naturalism is a presumed fact – if not *accompli*, but for some details. His Causal Argument (cf. note 1) has shown it to be so, if we had not already been persuaded by our good hard-headed respect for science and our disdain for superstition. Now, if one does thus take Naturalism for granted, then – given any phenomenon or item that is uncontroversially a part of everyday human life – it will be obvious that the item admits of some Naturalistic treatment or other, and it will not much matter which. The practice of producing and understanding fictions, in particular, is a quotidian human activity, performed using nothing but physical minds, mouths and pens. So there will be no great difficulty fitting fiction and its products into nature; they already are in nature.

If that is the way Armstrong is thinking, the problem is dialectical. We do have powerful motives for Naturalism, but the obstacles must equally be recognized, for they are dismaying. Attempts have been made to Naturalize modality, by philosophers whose brilliance is a byword, and the attempts have not succeeded; as I said in Section 1, there is not even a satisfactory *non*-Naturalistic theory of modality. Modal facts remain an ostensible counterexample to Naturalism.

So too, one cannot assume that a good theory of fiction (in particular) is just around the corner. For fiction is all too close to modality; fictional entities are nonactual possibilities, save for those which are impossibilities. The analysis of modality in terms of fiction is a step, but not a large step. Let us therefore pursue a few avenues toward a non-possible-worlds semantics of fictional truth.

## 6

First, there are syntactic/inferential accounts. For example, a statement *S* will be true-in a fiction *F* just in case *S* is a deductive consequence of some member of *F* (*F* being construed as a set of sentences or formulas that regiments *F*), where 'deductive' means proof-theoretic rather than merely semantic.<sup>16</sup>

But to apply an account of this sort to Armstrong's 'Wittgenstein worlds' would result in a specifically linguistic form of Ersatzism, whose mock-ups would be parochial to a particular formal language. First, it would require an actual fiction in which to ground Armstrong's ideal entities. Let us inaccurately but alliteratively call such a fiction 'Leibniz's Lie'; it says that alongside the actual world there exists an inconceivably huge panoply of other worlds, exhibiting structure *S* (of the sort needed to support intensional logic). The structure *S* must somehow be spelt out, in detail, because all our subsequent statements about 'worlds' must be strictly deducible from the Lie; and the Lie must be expressed in a particular language, say a formalized version of English, in order for deducibility to be defined on it. Then a statement like 'Some possible world contains a golden mountain' will be fictionally-true if and only if there is a formally correct deduction of the statement from the Lie.

This is not Ersatzism *in propria persona*, since it does not deliberately or directly furnish a set of actual world-simulacra. But it creates such a set indirectly: For any given world to 'exist' for purposes of logic and semantics is (according to Armstrong) for that world to exist-in-fiction, which is in turn for the statement of its existence to be actually deducible from Leibniz's Lie and thus for that statement actually to exist. Thus, to every world there corresponds its existentially quantified specification-in-formalized-English, and if that correspondence holds then we might as well accept the specifications as Ersatz worlds and be done with it. But Armstrong does not want that. Moreover, a parochially linguistic Ersatzism faces well-known problems of its own.<sup>17</sup>

This last problem for the syntactic/inferential account actually expands into a general difficulty for any fictionalism regarding the Wittgenstein worlds, syntactic/inferential or not: Again, fictional-truth *tout court* requires a fiction. Statements are fictionally true or pretend-true only because there actually exist stories and other fictions for them to be true-in. But who authored a fiction according to which any one or more of the Wittgenstein worlds existed? It is not obvious that Leibniz's Lie actually exists.<sup>18</sup>

There is a further, though related difficulty. In order for 'Some possible world contains a golden mountain' or any other specific possibilistic

quantification to be deducible from Leibniz's Lie, the Lie must contain the appropriate stock of specific predicates, such as 'golden' and 'mountain'. Thus the Lie cannot be a merely schematic description of a set of worlds, but must syntactically imply the existence (at some world) of everything that is in fact possible. But the Lie was supposed to be an actual fiction, historically tokened by someone in the real world. So for Armstrong's purposes (assuming he were to pursue the syntactic/inferential strategy) someone would have to have actually said something about gold and mountains that entails the existence of a golden mountain. Philosophers using Meinong's famous example have done so, no doubt, but the same is not true for every single adjective-noun pair that in fact describes a possible object.

Armstrong's Combinatorialism might eventually rescue this syntactic/inferential incarnation from this objection, for someone – at least Armstrong himself – might actually say something about 'all combinations' of predicates, along with a handy definition of a 'combination' and some level-crossing principle to handle use-mention problems, and add all that to an original fiction that manages to contain all the primitive predicates. However, something of the sort would have to be worked out at length, and we may be sure the details would be nasty. The syntactic/inferential strategy is not hopeless, but neither is it very promising.

## 7

Secondly, there are local-ambiguity theories of fiction, according to which the words occurring in a fictionally true statement have other than their literal meanings – at least, the copula in a subject-predicate sentence has a special meaning, which might be expressed as 'fictionally-is':<sup>19</sup> It is not true that Sherlock Holmes lived in Baker Street (for the perfectly real Baker Street is not such that any Sherlock Holmes ever lived in it<sup>20</sup>); what is true is only that Holmes fictionally-did live in Baker Street.

I myself do not believe that there is any sense in which sentences like 'Sherlock Holmes lived in Baker Street' are true save when they are used as abbreviating 'In fiction F, ...' statements. But it is clear that if I am wrong and such a sentence *is* ever true at face value in virtue of its copula's having taken a fictionalized sense, then the sentence's nonexistent subject has turned Meinongian Object. If for 'Sherlock Holmes lived in Baker Street' to be true is for Sherlock Holmes to fictionally-have lived in Baker Street, then Holmes is being treated as having ontological status of some sort. But for Armstrong, Holmes does not exist, subsist or have any sort of being.

Also, were Armstrong to pursue the present line, the fictional copula would itself still need a semantics. What is the truth-condition of

'Sherlock Holmes fictionally-did live in Baker Street'? If we are denied possible worlds as well as any form of Meinongianism, I am at a loss.

## 8

Thirdly, there are speech-act accounts of fictional truth.<sup>21</sup> On such a view, someone who asserts a fictional sentence meaning it fictionally is not making a literal declarative statement, but is engaging in a pretense. The felicity conditions on such pretend-statements do not include literal truth (*contra* Plato, it is simply not a criticism of a work of fiction to point out that the work is not literally true). Of course fictional statements have many other kinds of felicity conditions, but not ones that are immediately relevant to modal metaphysics.

The trouble for speech-act accounts is that they still must distinguish between fictional truth and fictional falsity. The accounts differ in their means of explicating 'pretend-true' and distinguishing pretend-true from pretend-false statements.<sup>22</sup> But note that for Armstrong's purposes they will have to do that job without recourse to possible worlds, and if their proponents want to differ significantly from syntactic/inferential accounts, then neither can pretend-truth be just a matter of syntactic deducibility from a particular fiction.

Speech-act theorists often sympathize with Gricean analyses of linguistic meaning and illocutionary force in terms of a speaker's (richly nested) propositional attitudes, and that strategy seems especially appropriate to the explication of fictive acts. Perhaps the difference between fictional truth and fictional falsity has to do with speakers' intentions and beliefs; though often the real world must cooperate in some ways if a statement is to be fictionally-true, far less is demanded of the world by fictional-truth than by literal truth. But here again, it is hard to see how the analysis would go without recourse to one or more of the means already denied to Armstrong – possible worlds, Meinongian objects, a syntactic/inferential approach to the "In fiction F" operator, and so on.

I do not know what further alternative approaches there may be to fictional truth. But in any case it seems clear that Armstrong has most of the interesting work still ahead of him, even if we agree that 'it would be truly surprising if no . . . satisfying [actualist, one-world] account were available'.

## 9

I would raise a final question for Armstrong's modal metaphysic. It is an internal question, not to say an *ad hominem*: He describes his theory as a

Fictionalist Combinatorialism; and as I have said, he is entirely serious about the Fictionalist part. But if the Fictionalism will eventually triumph over the difficulties I have raised and work out satisfactorily, *why bother with the Combinatorialism?* For Fictionalism itself guarantees Actualism. If 'other worlds' exist no more than ideal entities do, and if statements about them are at best fictionally-true, then that is modal metaphysics enough; there is no need for extraneous restrictions on how the 'worlds' may be constituted according to the fiction. They would not have to be rearrangements of the actual atoms; they would not have to be Naturalistic; they would not even have to be logically possible entities in their own right. For they are fictional, and their parent fictions can say anything we like without ontological cost to reality. In particular, we could take Lewis's (1986a) virulently Concretist theory of worlds as a fiction, and help ourselves to that theory's technical advantages without paying the price of admission. Lewis calls Ersatzism 'paradise on the cheap', but Fictionalism would be even cheaper.

Armstrong seems to address this point (p. 50):

I used to think that . . . Lewis's multiverse taken as a fiction would serve. The trouble with this idea is that the fiction would be a fiction of a monstrously swollen actuality. But the merely possible worlds are *alternatives* to the actual world and to each other. [Italics original]

But I do not entirely follow that. I do see what Armstrong means by 'a monstrously swollen actuality', which alludes to his argument (pp. 16–17) that, if Lewis is right in thinking that there *exist* other physical spacetimes merely dislocated from ours, then they are actual regions of reality rather than merely possible 'worlds'. But remember fiction's rampant, utterly anarchical freedom: A fiction can say anything. A fiction could say even that Lewis's outrageous theory is true as it stands (and not just as reconstrued by Armstrong or by anyone else) – even if the latter statement is logically incoherent.

So, why not be Fictionalist Lewisians, or Fictionalist Meinongians or Fictionalist anything else, rather than Fictionalist Combinatorialists? Armstrong's answer cannot lie in basic modal metaphysics at all. Fictionalism is too powerful a strategy. If successful, it solves ontological problems almost before they have arisen; no further basic metaphysics is called for. Nor, as I have mentioned, is Combinatorialism needed to preserve Naturalism, for there is nothing wrong with contra-Naturalistic fiction.

Rather, I think Armstrong's Combinatorialism is relegated to an ideological role and perhaps some tasks of fine-tuning. Its main functions seem to be to enforce 'actual-world chauvinis[m]' (p. 56) and to *remind us of* Armstrong's Naturalism. An obvious example of both is Armstrong's

vigorous rejection of ‘alien’ universals in Chapter 4 (a rejection with substantive modal consequences, not least that Armstrong must abandon S5 for S4).<sup>23</sup> Combinatorialism also militates against the empty world (pp. 63–4) and so solves the ancient cosmological conundrum; it suggests a modal epistemology that ‘makes possibility epistemically accessible’ (p. 102); it licenses a Humean ‘Distinct-Existences Principle’ (p. 115) that does a bit of work; and the like, here and there. It is no wonder Armstrong favors Combinatorialism, for a dedicated Naturalist’s notion of an ‘alternative possibility’ would be a very concrete notion of the physical recombining of Nature’s actual constituents. It is a pity, for Armstrong and for us all, that Combinatorialism requires one to choose between Ersatzing and Fictionalism.<sup>24</sup>

## 10

My critique of Armstrong’s theory of possibility has been harsh, for I do not believe the theory has come anywhere near success. But my skepticism should occlude neither my sympathy nor my admiration for Armstrong’s project. As I said in the beginning, I think modality is the toughest nut in Nature (or out of it, as the case may be), and I do not believe *anyone’s* theory has come anywhere near success or is likely to do so in our lifetimes. Armstrong’s zeal and fortitude deserve our thanks.<sup>25</sup>

## NOTES

1. Armstrong’s exact definition of ‘Naturalism’ has varied slightly from work to work. His defense of Naturalism consists largely in his well-known Causal Argument, whose most recent version is presented in Chapter 1 of Armstrong (1989a); see also Chapter 12 of Armstrong (1978).
2. Nor, he would have added, does anything in the philosophy of language or linguistic semantics require any exception to Naturalism, for meaning is a function of mind (Armstrong 1971; he regards that article as superseded by Bennett 1976). As for ethical value, Armstrong is not a moral realist in the first place, but falls in with the view of Mackie (1977).
3. All my subsequent page and chapter references will be to that work unless marked otherwise.
4. Assuming, at least, that one is a modal realist in the first place. One might simply refuse to countenance modal distinctions, and/or regard statements of possibility and necessity as false or meaningless. But one would thereby deprive oneself of almost everything one might think of to say on most everyday topics.
5. That is why in my own work (e.g. Lycan 1991b) I have accepted David Lewis’s (1986a) agenda of trying to show why an Ersatzist theory of modality is superior on balance to Lewis’s own mad-rhinoceros version of modal realism,

- rather than trying to refute Lewis's outrageous view outright. That his theory has some bizarre consequences cannot in itself be taken to show that an obviously better theory is possible.
6. The Positivist theory of necessity as truth by convention was wonderfully Naturalistic (assuming some Naturalization of truth and convention themselves). But it has few advocates nowadays, because of the perceived infirmity of the very notion of truth 'by' convention; Lycan (1991a) argues that this perception is correct. More sophisticated metalinguistic theories derive from Sellars (1948), but have never caught on.
  7. But the best known and best developed version of Combinatorialism has been Cresswell's (1972, 1973).
  8. Later, in Chapter 9, he sketches a program for Naturalizing set theory. But he has an additional reason for eschewing sets in pursuing the present project (p. 47): 'It seems that sets are supervenient on their members, that is, ultimately, things which are not sets. Supervenience, however, is a notion to be defined in terms of possible worlds, and hence in terms of possibility. It seems undesirable, therefore, to make use of sets in defining possibility'.
  9. He provides for 'relative atoms' in case it should turn out that matter is indefinitely divisible (Chapter 5); he refines Wittgenstein's Humean compossibility assumption at some length (Chapters 6 and 8); and he elaborates the underlying theory of universals (Chapters 7-10), finally attempting to subsume mathematics and logic.
  10. 'Some statements about ideal gasses, frictionless planes and economic men are true, while others are false' (p. 50).
  11. This is not, of course, to say that there actually does exist a golden mountain, but only that 'Some possible world contains a golden mountain' is one of the statements that would be accepted rather than rejected by modal metaphysicians, in the same sense as some statements about ideal gasses are accepted rather than rejected by physicists.
  12. Such an explicative program is an instance of what Lycan (1979) called the 'paraphrastic' approach to possibilia. The following critical points are digested from that essay.
  13. As I quietly put it in Lycan (1979), 'Resting a philosophical theory on unexplained counterfactuals is like hoping one may cross a freezing river by hopping across the heaving ice floes'.
  14. Cf. Field's (1980) fictionalist theory of numbers.
  15. He adds that in any case 'the notion of the fictional . . . has no special link with possibility', for there are impossible fictions (p. 49). Agreed: no *special* link, in that sense. But certainly a very important link, in that fictional entities are nonactual objects of intelligible discourse.
  16. Any plausible theory of fictional truth will expand this strict deductive-closure criterion by also including further sentences deduced or induced with the aid of real-world information brought to bear on the reader's interpretation of the text. See Lewis (1978) and Ross (1987), but for present purposes try to ignore and abstract away from the couching of their accounts in terms of possible worlds.
  17. Armstrong might reply that those very problems (e.g., there being fewer than continuum-many sentences of any actual formal language) constitute a sufficient reason for *not* simply taking the specifications as world surrogates, and so much the worse for my argument. But each problem translates