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Introduction

I.1 AN OVERVIEW

The hypothesis of this work is that the world, all that there is, is a world of states of affairs. Others, Wittgenstein in particular, have said that the world is a world of facts and not a world of things. These these are substantially the same, though differently expressed.

The general structure of states of affairs will be argued to be this. A state of affairs exists if and only if a particular (at a later point to be dubbed a *thin* particular) has a property or, instead, a relation holds between two or more particulars. Each state of affairs, and each constituent of each state of affairs, meaning by their constituents the particulars, properties, relations and, in the case of higher-order states of affairs, lower-order states of affairs, is a contingent existent. The properties and the relations are universals, not particulars. The relations are all external relations.

It is useful to admit *molecular* states of affairs. These, however, are mere conjunctions (never negations or disjunctions) of the original states of affairs. Molecular states of affairs constitute no ontological addition to their conjuncts. But in one special case, to be mentioned in a moment, they become very important.

For first-order states of affairs, that is, states of affairs that do not have states of affairs as constituents, the Tractarian thesis of Independence is somewhat speculatively, but nevertheless hopefully, advanced. No such state of affairs entails or excludes the existence of any other wholly distinct state of affairs. Given Independence, a rather simple and straightforward Combinatorial theory of what possibilities there are, can be put forward. If Independence fails, things get more complicated.

The present theory is not biased towards Atomism nor is it biased against Atomism. An *epistemic* possibility that requires to be noted is the possibility that every (first-order) state of affairs is molecular, that is, analysable into a conjunction of states of affairs. (A simple if to a degree controversial example: *a*'s being *F* may be equivalent to *a*'s being *G* & *a*'s being

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H, with $F=G \ \& \ H$. The pattern may be repeated for G and H, and so for ever.) Every first-order state of affairs may be a nest of first-order states of affairs: states of affairs all the way down. To allow for this epistemic possibility, a Combinatorial theory of what possibilities there are requires further elaboration.

It is the hypothesis of the *Tractatus*, one which re-appears in the work of Brian Skyrms (1981), that all facts are first-order facts. There are no facts about facts. In the present work, however, it is argued that (non-supervenient) states of affairs having states of affairs as constituents are required in two rather different sorts of case. First, as Russell urged (1972 [1918] pp. 93–4), there are facts or states of affairs of totality: for instance, the state of affairs that a certain collection of first-order states of affairs are *all* the first-order states of affairs. Second, there are the laws of nature, construed in the present work as states of affairs contingently linking universals, or, putting it differently, contingent connections between state-of-affairs types. Both sorts of higher-order states of affairs violate Independence (in a fairly unpuzzling way, it will be argued) because they exclude what would otherwise be certain possibilities at the first-order level. The discussion of laws of nature will be preceded by preliminary discussions of, first, powers and dispositions, and, secondly, singular or token causation. But in the end it is laws of nature that will be appealed to in order to explain powers and causation, rather than, as in some other theories, the other way around.

These contingent states of affairs, first-order and higher-order, including their constituents, constitute the sole *truthmakers* for all contingent truths. The notion of a truthmaker is central to the argument of this work, but it cannot be fully elucidated until the central chapter 8. For the present let us just say that it is whatever in the world makes a truth true. The hyphen that is often used in this term ‘truthmaker’ (to which I was introduced by C. B. Martin) has been dropped for simplicity’s sake. But there are necessary truths, for instance the truths of mathematics, of set theory, of logic, or truths that certain internal relations hold. What sorts of truthmaker, if any, do necessary truths have? It will be argued here, in the general spirit of the *Tractatus*, that necessary truths have no further truthmakers over and above the contingent states of affairs. Very often, their truthmakers are the mere *constituents* of states of affairs: particulars and universals. (Mere constituents are truthmakers for a small class of contingent truths also.) Thus, between any two universals an internal relation of difference obtains. The truthmaker for this rather trivial necessary truth is

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nothing more than the two universals themselves. Necessary truths have truthmakers of a reduced sort, and this is taken to imply that they have a correspondingly reduced informativeness. Accounts of the nature of numbers (they are internal relations), of classes (they are certain sorts of states of affairs or possible states of affairs), complete this metaphysic.

Our task now is to expand, to explain and to defend these brief sentences. Flesh must be put on these bare bones. The order of exposition will not necessarily follow the order of the summary just presented. I have already considered at length elsewhere, most of the topics covered, and will be relatively brief at certain points, referring the reader who wants more detail to earlier work. This does not mean, I hope, that earlier writing will be presupposed. The book is intended as a self-contained story.

The chief novelty from my own point of view will lie in bringing the topics together in a systematic framework. But philosophy is very difficult. Mistakes and, still more depressing, failure to follow through promising insights in a convincing manner, abound in our subject. The hope is that here, besides a more synoptic view, there is improvement in detail on what I have written previously about a number of matters. At any rate, there is change!

1.2 HISTORICAL REMARKS

It is useful to say something about the background from which this essay emerges. The debt to Russell's Logical Atomism and Wittgenstein's *Tractatus* is obvious. (Robert Fahrnkopf has convinced me that Wittgenstein's 'objects' included both particulars and universals. Given this, the priority of Russell's work becomes evident. See Fahrnkopf, 1988.)

I was, however, still more profoundly influenced by the doctrine put forward by my teacher in Sydney, the Scots philosopher John Anderson, that reality, while independent of the mind that knows it, has a 'propositional' structure. The resemblances and differences holding between Wittgenstein and Anderson are usefully explored by Douglas Gasking in an article 'Anderson and the *Tractatus Logico-Philosophicus*' (1949). Anderson did not accept the distinction between necessary and contingent truths. He would also have thought that my general orientation, and in particular the way that my doctrine of universals is worked out, is excessively 'scientific'. But the propositional view of reality which he

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championed is the facts or states of affairs view of reality. Some more recent contributions to this way of thinking about the structure of the world, contributions to what will here be called a *Factualist* metaphysics or ontology, will be acknowledged as the exposition unfolds.

But why is it that a Factualist position has been so slow to emerge in two-and-a-half thousand years of Western philosophy? Scholarship may yet show that Factualist as opposed to Thingist ways of thinking about the world (if I may be permitted the latter expression) were never entirely absent. But why has it taken so long for Factualist ontologies to be advocated explicitly?

One thing that is fairly clear is that an explicit and ungrudging acceptance of the category or sub-category of *relation* is a relatively recent phenomenon. This was carefully documented by Julius Weinberg in his 1965 book. In a monograph *An Essay on Facts* (1987, ch. 2) Kenneth Olson shows again how both ancient and medieval philosophers constantly tried to assimilate relations between objects (fathering, say) to relational properties (being a father, and being a child) of the related objects. This, of course, hinders the recognition of polyadic as opposed to monadic facts or states of affairs. Yet the situation is still puzzling. After all, these same thinkers did have, indeed held very firmly to, the substance/attribute distinction. And, as will be argued in what follows, making the substance/attribute distinction can rather naturally turn into the recognition of *monadic* states of affairs.

My suggestion about what happened is that the muddle about relations eventually led the tradition to a turning point. There was a choice. It could go on to recognize both the substance/attribute distinction *and* a knitting together of a plurality of substances by relations, a double doctrine that should then have led on to a states of affairs ontology. Or else it could turn against even the substance/attribute analysis. The latter choice, the wrong choice, was made. Because of the confusion about relations, the linking of a plurality of substances by relations in polyadic states of affairs could not be countenanced. So the substance/attribute analysis could not be transformed into the recognition of monadic states of affairs. Untransformed, and standing on its own, substance/attribute came under attack. *One* conception of substance was retained: the conception of that which is capable of independent existence. No metaphysic can reject substance in *that* sense. But the substances thus admitted were apples and suchlike. Any suggestion of a further distinction between substance and attribute *within* the apple was scorned as metaphysical rubbish.

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Especial scorn was, and still is, reserved for the substance side of the substance/attribute distinction. But if that sort of substance is at risk, substratum as it is often pejoratively called, then obviously attributes, that is properties, are at risk also. The fall of one must at least imperil the other. Moderates might try to retain attributes by substantializing them in the acceptable sense of the word 'substance'. Such moderates made the attributes into 'junior substances' (to adapt Ayer's inspired phrase for sense-data) and then tried to bundle up these juniors to yield ordinary things. Extremists such as the later Wittgenstein and Quine scorned this device and tried to get along without any objective properties and relations at all. *Hinc illae lacrimae*, which being translated is: it had to end in tears.

I.3 TWO FURTHER DOCTRINES

The main object of this work is to defend a version of Factualism, that is, to defend an ontology of facts, or states of affairs as they will be called here. But two constraints will be put upon Factualism as expounded here. It should be compatible with what will be called Naturalism and also with Physicalism. In this section something is said about these two doctrines.

1.31 Naturalism

This term, which often has an epistemic flavour, is here appropriated for an ontological doctrine. It is the contention that the world, the totality of entities, is nothing more than the spacetime system. (An epistemological stance comes rather naturally with Naturalism thus defined. It is the contention that, except for the primitive verities of ordinary experience, it is natural science that gives us whatever detailed knowledge we have of the world.) The positive part of the thesis, that the spacetime system exists, is perhaps not very controversial, although some thinkers, including Idealist philosophers, do question it. The negative thesis, that the spacetime system is *all* that there is, is more controversial. Many religious persons wish to postulate a god that transcends spacetime. Many philosophers, not necessarily religious ones, maintain that there are entities, such things as numbers and universals, which exist and transcend spacetime.

It seems clear that one can be a Factualist without being a Naturalist. For instance, a Factualist might accept the existence of a transcendent deity. It is perfectly clear that one can be a Naturalist without being a Factualist. Many philosophers are. But if one wishes to uphold *both* theses,

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as in this work, then one must hold an identity thesis. One must hold that the spacetime system *is*, is identical with, a certain set or aggregate (the distinction between the two does not seem very important here) of states of affairs, a set or aggregate that is the totality of states of affairs.

One might work out the details of the identification in various ways. Here is one that at least has the merit of being simple, and so will serve as an illustration. The spacetime world is a structured (that is, related) set of spacetime points. These points are the fundamental particulars. That the points have certain properties and are related to each other in certain ways constitutes the fundamental states of affairs. This is illustration alone. This work neither affirms nor denies this sparse account of the spacetime world.

Notice that the thesis of Naturalism, as it is understood here, is not committed to the view that space and time, or even spacetime points, are ontologically fundamental. The nature of space and time is to be discovered *a posteriori*. It is a matter for science. And who is to say, given the present situation in quantum physics and cosmology, that space and time will not turn out to be analysable in terms of entities more fundamental?

1.32 Physicalism

The third thesis to be upheld in this work is the thesis of Physicalism. It asserts that the only particulars that the spacetime system contains are physical entities governed by nothing more than the laws of physics. The thesis is to be understood as a thesis about a *completed* physics. As a result, it has a certain in-built vagueness and imprecision. It may also be useful to distinguish between a *weak* and a *strong* Physicalism. Weak Physicalism is simply a doctrine about the spacetime world: that this contains only physical entities governed by nothing more than the laws of physics. It could even be accepted by a believer in a transcendent deity. Strong Physicalism is the view that everything there is, is governed by the laws of physics. Weak Physicalism plus Naturalism yields Strong Physicalism.

If we assume Naturalism, and also wish to combine Physicalism with the Factualist theory already adumbrated in Section 1, the main thesis of this work, then Physicalism can be presented as the thesis that (1) all fundamental universals, whether properties or relations, are those studied by physics, and all other first-order universals are structures involving nothing but these fundamental universals; (2) all fundamental laws are connections holding between these fundamental universals and other laws are no more than the fundamental laws operating under specific boundary conditions.

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1.4 EPISTEMIC CREDIT RATINGS FOR THESE THREE THESES

How plausible are these three theses? Or, if this question is too difficult, how should we rank the three theses in terms of creditworthiness? The right answer, it is suggested in this section, is (1) Naturalism; (2) Physicalism; (3) Factualism.

Naturalism is the least controversial of the three theses. Its positive component, the existence of the spacetime system, is a fairly secure anchoring point for our investigation. Obviously, we do not have here some indubitable Cartesian datum. The existence of the system may be intelligibly denied, and *is* denied by some philosophers and others. But its existence would generally be granted, and will be taken for granted here. As already noted, the (somewhat more controversial) negative thesis subdivides into two denials. First there is the denial that there is any transcendent deity or other spiritual force standing outside the spacetime system. Second there is the denial of the additional entities postulated by the philosophers.

It appears to many of us that the spacetime world does not need, and so in all likelihood does not have, any external spiritual ground of its existence. The overwhelming impression of external design and purpose given by living things, which used to be a rather strong argument for a designer, seems to be satisfactorily explained by Darwin's theory of natural selection when combined with contemporary genetic theory. However, that does not finish the Argument from Design. It appears to be the case that the very existence of stars and planets, and so the physical possibility of an evolutionary process, depends upon very delicate settings of values in fundamental physical equations, settings which it seems 'could very well have been otherwise'. See, for instance, the evidence marshalled by John Leslie (1989). This appears to make a case for external, and non-physical, forces directing the spacetime world.

At the same time, there is not wanting informed cosmological speculation that what we at present call spacetime is really just a *local* portion of all-embracing spacetime and that there are other localities, now isolated from us, where it is likely that different settings of critical values obtain. (See for instance, Guth and Steinhardt, 1989, and Andrei Linde, 1994.) If so, then the apparently remarkable fact that our locality permitted the emergence of life could be explained *away*. It would be no surprise that we found ourselves in a 'kind' locality. We would not have existed in any other!

Nevertheless, in the spirit of attending closely to any weak points that

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appear in one's position, the Naturalist needs to devote quite careful attention to the new form the Argument from Design has taken.

In contemporary philosophy, as opposed to scientific speculation, even in philosophy that is empiricist *and* scientifically oriented, entities that are thought to be additional to the spacetime system are often postulated. Following Quine, the additional entities are often spoken of as 'abstract'. They include, among other candidates, possible worlds, universals and classes. It will be part of the task of this work to argue that either such entities can be dispensed with or, as is preferable in general, that an account can be given of them *within* the spacetime system, with that system taken to be a system of states of affairs. It seems in any case that the postulation of these entities lying outside the spacetime system, a postulation made by philosophers only, is a dubious postulation. (A point to be expanded upon shortly.) So, in the epistemic order, the thesis of Naturalism is a reasonably plausible one.

We pass to Physicalism, though for the moment we abstract from the particular Factualist gloss that interprets it as a thesis about what sorts of properties and relations there are and how these universals are nomically related. Physicalism is a high-level, somewhat speculative and open-ended, scientific hypothesis. In particular it is a reductive hypothesis. Among philosophers, the case for Physicalism has been articulated at length, in my view persuasively, by J. J. C. Smart (see his 1963 in particular). Mention should also be made of an article 'The Thales Problem' by Gerald Feinberg (1966). There it is argued that the behaviour of ordinary physical objects, all the physical phenomena that could be observed by one like Thales, are pretty well explained, and explained comprehensively, within our current physics. That part of physics is substantially complete and unlikely to need revision. Falsification of Physicalism must come, if it does come, from elsewhere. So the thesis of Physicalism can, to a degree, draw on the authority of science itself. (For a very attractive defence of Physicalism by a contemporary physicist, see Steven Weinberg's *Dreams of a Final Theory*, 1993.) So the credit of Physicalism seems to stand quite high. But since it is a specific thesis about nature, that credit can hardly stand as high as Naturalism, or at any rate as high as the positive thesis of Naturalism that spacetime exists.

We come now to the Factualist thesis that the world is a world of states of affairs. It is fundamental to the methodology of the present inquiry that Factualism is put forward here as a hypothesis only, and a philosopher's hypothesis at that. Not all the beliefs of mathematicians about mathemat-

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ical matters of fact, nor all the beliefs of natural scientists about scientific matters of fact, are true, and even where they are true they are not always *known* to be true. But, agreeing with mathematical and scientific commonsense, it is here maintained against sceptics that in these fields much is known and that, in the past four centuries or so, there has been a huge increase of knowledge, indeed a steady increase in the rate of increase of knowledge, a phenomenon that is rather astounding. Not so for philosophy! It was not so long ago that the late Donald Williams could wittily and penetratingly declare that the philosophical agreements between him and the editor of his collected papers represented 'a rather impressive consensus in the present state of our subject' (1966, p. v).

The fact that philosophers disagree in such a thoroughgoing way, disagreeing even after a lifetime's difficult, painstaking and certainly intelligent reflection, can be explained plausibly only on the assumption that every one of them lacks *knowledge* in the sphere of philosophy. It seems to me, perhaps optimistically, that the situation has improved a little since Williams wrote his words. Something a little bit more like *results* seem to be emerging in philosophy, or at any rate in philosophy conducted with an analytical/scientific orientation. But philosophical arguments and conclusions must still be given a low epistemic credit-rating. The reason for this is that, while rightly aspiring to be a rational discipline, philosophy lacks the compelling (although not infallible) tribunal of observation that serves as the *ultima ratio* for natural science, and the still more compelling (although still not infallible) tribunal of calculation and proof that disciplines mathematics and logic.

The uncertainty that attaches to philosophical arguments and conclusions is compounded by the fact that, especially in metaphysics, every question proves on examination to be subtly intertwined with every other. The strategy of divide and conquer that has served natural science and mathematics so well is far harder (though not quite impossible) to apply in philosophy. Metaphysicians, in particular, find over time that they must present a position as an assemblage of more or less interlocking doctrines that cover the whole ontological field. That multiplies the chances of error.

That is not to say that there cannot also be fruitful *uncouplings* in philosophy, a point recently made by Keith Campbell (1991). A package is needed but, *a priori*, there are different (and often overlooked) ways of assembling the package. That is why, at various points in this essay, choice-points will be indicated and some attempt will be made to assess

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the advantages and disadvantages of the different ways of proceeding available to those who have arrived at these points.

Nevertheless, it is the difficulty of the enterprise that needs to be stressed, and with it the difficulty of having any rational assurance that what one is saying is true. (Mere assurance is common enough among philosophers, and may even be a psychological necessity in order to keep going.) The theme of this work is that states of affairs are ontologically basic. It would be absurd to think that a philosophy of states of affairs is epistemically basic.

So although this book is written to defend Factualism, that thesis cannot be accorded as high an epistemic credit-rating as the nevertheless somewhat speculative, science-based, thesis of Physicalism. Still less does it have the credit-rating of the fairly attractive (though perfectly disputable) thesis of Naturalism.