

Jason Turner. *The Facts in Logical Space: A Tractarian Ontology.* Oxford University Press 2016. 320 pp. \$85.00 USD (Hardcover ISBN 9780199682812).

In this work, Turner defends a view he calls Tractarian Factalism (TF). It consists of the following four doctrines:

1. Factalism: the world ultimately consists only of facts.
2. Atomicity: facts are atomic.
3. Spatiality: facts are arranged in a logical space.
4. Structurelessness: facts have no internal structure. (11)

Turner's work is an impressive piece of rationalist metaphysics that I recommend to specialists working in the field. However, I have two overriding concerns about it, which I will discuss at the end of the review.

In chapter one, Turner elaborates upon the four doctrines of TF. Regarding *Spatiality*, logical space is not to be understood as a plurality of possible worlds. Rather, it is something that possesses a geometrical structure that allows us to represent the facts that inhabit that space as bearing various geometrical relations to each other (14-16). Regarding *Structurelessness*, the claim that facts have no internal structure signifies that Turner's facts are very different than, say, the facts of Gustav Bergmann or the states of affairs of David Armstrong, both of which have particulars and properties as constituents. Indeed, for much of the work, Turner regards facts as nothing more than various points or nodes on lines that constitute the geometrical structures of logical space (16). Given *Structurelessness*, *Atomicity* might initially seem redundant. But what Turner means by *Atomicity* is that facts ground what he calls atomic appearances. For example, according to him, whereas the appearance that a certain apple is red is atomic, the appearance that all electrons are negatively charged is not (13). According to Turner, since appearances are grounded in the underlying facts of logical space, the latter constitute 'sober metaphysical reality' (10). Hence, *Factalism*.

Chapter two is an exposition of what Turner calls Tractarian geometry. This geometry constitutes the framework in which he tells his various grounding stories about how facts give rise to appearances. He begins by defining what he calls quality spaces, which are lines or grids of various dimensions that, he claims, allow us to represent properties in the realm of appearances. Roughly speaking, single lines represent monadic properties, square grids of intersecting lines represent dyadic properties, cubical grids represent triadic properties, etc. (67). Turner then uses quality spaces to define what he calls hyperspaces. These, he contends, allow us to represent objects in the realm of appearances. Here it should be noted that Turner constructs both quality spaces and hyperspaces out of the same underlying facts in logical space—again, these facts are simply points on the lines from which the aforementioned spaces are constructed. Thus, according to Turner, TF affords us a unified one-category ontology (20), a point to which I will return below.

In chapter three, Turner tells three grounding stories about how the facts give rise to the appearances. While the first is a holistic story that associates a complete description of the realm of appearances with a complete description of the realm of facts in logical space, the other two are piecemeal stories that associate statements about individual appearances with statements about individual facts. A worry one might have about these stories is that since they merely associate facts with appearances, it is unclear how the stories succeed in rendering the facts more fundamental than

the appearances, given that, whereas the relation of association is symmetrical, the relation *being more fundamental than* is not. Though I am not sure that Turner adequately addresses this worry, I will not pursue the matter here. On the other hand, it should be noted that while much of the discussion in this chapter and others is fairly technical in nature, Turner does an admirable job of making the discussion clear.

In the fourth chapter, Turner takes up the issue of modality. As he indicates, while Combinatorialism is not essential to TF, the two are a natural fit (197). Much of the discussion in the chapter is given over to an examination of two traditional problems for Combinatorialism. The first is the worry that it entails Necessitarianism (i.e., the view that, given any x , if x exists, x does so necessarily). The second is the color exclusion problem. Turner attempts to mitigate the first worry by arguing that Necessitarianism is not as implausible as it might at first seem. And he attempts to mitigate the second problem by endorsing Jessica Moss's recent proposed solution to it. I will have more to say about Necessitarianism below. Regarding the color exclusion problem, I will simply note that I was not convinced either by Turner's claim that Moss's solution does not require the existence of disjunctive properties, or by his claim that, regardless of whether or not they are disjunctive, the properties it does require are fundamental (205).

Finally, in chapter five, Turner attempts to tie up the loose end of explaining how natural languages—which, according to him, exist only in the appearances—can be used to refer to the facts in logical space. And in chapter six, he explores some alternative ways in which TF might be formulated.

As I said above, I have two overriding concerns about the work. First, Turner fails to justify a belief in the existence of the facts of TF. Ironically, he undercuts most of the putative justifications he considers. For example, one obvious way to attempt to justify a belief in the existence of the facts would be to appeal to the authority of Wittgenstein. But Turner is explicit that TF is not to be understood as an attempt to expound that thinker's views (9). A second way to attempt to justify the belief would be to appeal to a truth-making principle that requires there to be facts if there are to be true statements. But as Turner points out, 'there are serious questions as to whether Tractarian factalists can satiate a hunger for truthmakers' (18). A third way would be to claim that TF breathes new life into Combinatorialism about modality. But just as one can consistently adopt TF without adopting Combinatorialism, one can consistently adopt the latter without adopting the former. A fourth way, alluded to above, is by noting that TF affords us a one-category ontology. But in fact TF does so only if one is prepared to adopt what Turner calls Error Theory about the appearances, according to which they actually do not exist at all (23). It is revealing that this is not something that Turner himself is prepared to do (331). Of course, there are the various grounding stories Turner tells us about how facts give rise to appearances. But at no point was I convinced that appearances could be grounded only in facts. Nor, more importantly, was it ever clear to me why Turner thought that appearances had to be grounded in something else in the first place.

In addition to the concern about whether one should be led on the basis of a prior belief in the existence of the appearances to believe in the existence of the facts, I also have a concern about whether anyone would ever be led on the basis of a prior belief in the existence of the facts to believe in the existence of the appearances. I admit that this concern is perhaps more idiosyncratic than the first one. Still, from Turner's description of it, the realm of facts in logical space is a very self-

contained and orderly place. By contrast, the realm of appearances is a veritable buzzing, blooming confusion. To cite just one difference among many, whereas the realm of appearances is manifestly a very colorful place, the realm of facts is entirely devoid of color (23). For this reason, if we assume—perhaps implausibly—that one could somehow begin with a commitment to the existence of just the facts in logical space, presumably one would find it perplexing to be told that, in addition to this realm, there exists a separate realm of appearances. (By way of analogy, presumably one would find it perplexing to be told that the realm of sensible, changing things exists if one had somehow begun with a commitment to the existence of just Plato’s realm of forms.) Perhaps Turner can put a dent in this worry by adopting Necessitarianism about the facts and the appearances, which is something he seems to do (265). Or perhaps he would simply object that no one ever could begin with a commitment to the existence of just the realm of facts, given that one is an appearance oneself (331). Still, I can’t help but think that if one somehow began with a commitment to the truth of just Factalism, Spatiality, and Structurelessness, one would find the very notion of the realm of appearances confounding. To be sure, a similar problem besets various other rationalist systems of metaphysics: in attempting to devise a realm of things that explains the nature of the realm of appearances that manifestly exists about us, one runs the risk of making the existence of latter realm seem somehow extravagant. When it comes to ontology, I would encourage Turner to give empiricism another look.

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