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KIM ON EMERGENCE

ABSTRACT. Emergence requires that the ultimate physical micro-entities have "micro-latent" causal powers, which manifest themselves only when the entities are combined in ways that are "emergence-engendering," in addition to the "micro-manifest" powers that account for their behavior in other circumstances. Subjects of emergent properties will have emergent micro-structural properties, specified partly in terms of these micro-latent powers, each of which will be determined by a micro-structural property specified only in terms of the micro-manifest powers of the constituents and the way they are related. If the determiner and the determined properties are distinct, this determination is the basis of the supervenience of emergent properties on non-emergent physical properties. If not, emergence does not involve such supervenience. Either way, there is no problem with diachronic downward causation.

Those interested in the metaphysics of mind already owe a considerable debt to Jaegwon Kim for the work he has done over the last couple of decades in clarifying issues concerning the supervenience of the mental on the physical. We now owe him an additional debt for what he has done in recent years to throw light on the murky topic of emergence. Some of what I say here will disagree with Kim's views; but if it were not for his illumination of the topic I would have no views about these matters at all.¹

Let me start by saying something about how I think emergence should be understood. In his discussion of emergence in Mind and Its Place in Nature, C.D. Broad discusses what he takes to be a case of emergence, namely the properties of silver-chloride relative to those of its chemical elements, silver and chlorine. And he offers two descriptions of this which, he says, "may be theoretically different, but in practice they are equivalent."² On the first, the "properties" of chemical elements are "very largely propositions about the compounds which they form with other elements under suitable conditions." These properties cannot be "deduced" from any combination of other properties of the elements. So we don’t know all of the properties until these elements have been put in the

presence of each other. Later he puts this by saying that certain of the properties remain "latent" until the substances have been combined in certain ways. On the other way of describing the case, we confine the term "property" to those characteristics that manifest themselves when the substances don't interact chemically with others, i.e., "the physical characteristics of the isolated elements." Here we can know all of the properties, but we can't know all of the laws about the results of combining elements with these properties until we have actually combined such elements in what I will call "emergent engendering" ways.

Broad's first description involves saying that the elements have "latent" properties, ones we can learn about only by seeing the results of combining those things in certain ways. And I think that the second description implies that the elements have, if not latent properties, at least latent causal powers. Corresponding to any law saying that things of a certain sort make a certain contribution to causing a certain effect in certain circumstances there will be a "power" of things of that sort to contribute to producing such an effect in such circumstances. And such powers will be grounded in properties of the things that have them. One possibility is that the properties that ground them are ones that we can know about without combining the elements in the particular way in question; we know about them because of other powers they bestow, but only learn of the latent powers when the elements having these properties are combined into the relevant sorts of combinations. Another possibility is that they are bestowed by properties of which we can have no inkling until the elements have been so combined. In that case there will be latent properties as well as latent powers. But in either case, the elements will have latent powers that are bestowed by their properties, and it will be in virtue of these properties and the powers bestowed by them that the complexes built out of them will have their emergent properties.

Although Broad is here discussing the alleged emergence of properties of chemical compounds from those of chemical elements, I think that something analogous to what he says here has to apply to all cases of emergence, if such cases there be. I am taking it, as Kim does, that the emergentist holds that the subjects of emergent properties are composed entirely of physical components; ultimately