

Functionalism without multiple supervenience

Ausonio Marras

Department of Philosophy, University of Western Ontario, London, ON, N6H 1T4, Canada. amarras@uwo.ca <http://publish.uwo.ca/~amarras>

Abstract: Multiple supervenience is a problematic notion whose role can well be served by a contextualized or properly restricted standard notion of supervenience. It is furthermore not needed to defend functionalism against Kim's charge that cross-classifying taxonomies imply a serious form of dualism; nor does Ross & Spurrett's (R&S's) Kitcherian account of the metaphysics of causation crucially depend on multiple supervenience.

Because *multiple supervenience* is meant to play a large role in Ross & Spurrett's (R&S's) account of the metaphysics and epistemology of special science explanations, it is important to be clear as to what kind of relation it is and how it is supposed to help us resist Kim's reductionist stance. The notion makes its appearance in the context of the authors' response to Kim's (1998) charge that nonreductionists who appeal to the "cross-classification thesis" with respect to the mental and physical taxonomies are committed to abandoning psychophysical supervenience and to embracing "a serious form of dualism" (for supervenience is required for upholding the "causal closure of physics," a minimal requirement for physicalism). Here is what the authors say to this: "According to Kim, [holding the cross-classification thesis] amounts to a denial of supervenience as a one-way relation, permitting what Meyer (2000) calls 'multiple supervenience'" (sect. 3.1, last para.). They then go on to suggest that there are reasons for doubting that multiple supervenience implies any sort of dualism that denies the causal closure of physics. Because, as they later point out (sect. 3.3), Kim never confronts the idea of multiple supervenience ("it's off his radar in so far as it is more powerfully antireductionist than anything he seems willing to consider"; sect 3.3, last para.), their response to Kim suggests that even if he is right in claiming that cross-classification implies the denial of "one-way supervenience," he nonetheless fails to appreciate that this leaves open the possibility of another kind of supervenience, *multiple supervenience*, which (by their lights) is consistent with cross-classification, as well as with the causal closure of physics.

I think there are problems with this response. First, what sort of relation do R&S understand multiple supervenience to be? By contrasting it to "supervenience as a one-way relation," they seem to imply that multiple supervenience is *not* a one-way relation, and by supposing that the possibility of multiple supervenience enables one to "reject [Kim's] implicit premise that supervenience relations must all be 'downward,'" or that they all "point unidirectionally to physics" (sect. 3.2, para. 2), they seem to imply that *multiple supervenience* may point *upwards*, in the opposite direction than the standard sort of supervenience entailed by multiple realization. I think this is a confusion. All supervenience, multiple or otherwise, is a "one-way," unidirectional relation from the higher (functional) level to the lower (realization) level if conceptualized as a *dependence* relation, and from the lower to the higher level if conceptualized in terms of a relation of *determination*. The only difference is that the *mapping* effected by standard supervenience is a *one-many* mapping (at least if multiple realization is involved), whereas in the case of multiple supervenience, the mapping is *many-one*: multiple higher-level properties supervene on the same base property. No doubt R&S must have meant something of the sort; for surely the "direction of determination" (or, conversely, the "direction of dependence") remains the same in both cases.

Second, the idea of *multiple supervenience* so characterized is, strictly, incoherent. Consider two distinct, nonequivalent higher-level properties M1 and M2, and suppose that something *x* exemplifies M1 but not M2 at *t*1 and M2 but not M1 at *t*2 (i.e., suppose that *x* has undergone a change with respect to its M properties). Multiple supervenience would have us suppose that there might be a base property, P, on which *both* M1 and M2 supervene. How-

ever, that is impossible: by definition, supervenience requires that there cannot be a change with respect to the supervening properties without a corresponding change with respect to the subvening properties. One could fix this by imposing certain restrictions, for example, by requiring that the supervening properties be co-extensive (where none can be exemplified without the others being simultaneously exemplified), by relativizing them to a given context (as would be natural in "Twin-Earthian" cases) or interpretation scheme (as when the same physical process in a computer implements different programs), or by broadening the supervenience base so as to include the appropriate contextual conditions. However, then it is not clear that the notion of *multiple supervenience* does any work that cannot be done by the standard notion of supervenience, locally or nonlocally construed.

Third, multiple supervenience is, in any case, not needed to answer Kim's challenge from cross-classifying taxonomies. We can have cross-classification *either* when we can make distinctions in terms of the higher-level properties that we cannot make in terms of the base properties, *or* when we can make distinctions in terms of the base properties that we cannot make in terms of the higher-level properties, *or both*. Now it is clear that when we are dealing with higher-level *functional*, and, in particular, *mental* properties, it is the *second* of the aforementioned options that is the relevant one, for it is of the essence of functional/mental properties that they be (at least in principle) *multiply realizable*. However, that implies that there are distinctions that can be made by the *base* (or *physical*) taxonomy that cannot be made by the functional/mental taxonomy, and that is just to say that the former supervenes on the latter. Therefore, cross-classification, in so far as it pertains to the functional/mental taxonomy *vis-à-vis* the physical taxonomy, does not violate supervenience and thus entails no "serious form of dualism." Conversely, the first and the third options above do entail the denial of standard supervenience: they represent precisely the sort of situation envisaged under *multiple supervenience* (hence, my earlier claim that unrestricted multiple supervenience is not supervenience at all). Far from providing a way to meet Kim's challenge from cross-classification, multiple supervenience falls prey to just that challenge.

Fortunately, then, functionalism does not have to depend on multiple supervenience to prove its metaphysical credentials, nor do R&S's valuable insights about the autonomy of functionalist explanation in the special sciences. Indeed, what does all the interesting work in their defense of functionalism against Kim's epiphenomenalist challenge is the unfolding of the Kitcherian idea that the metaphysics of the attribution of causal powers cannot be divorced from the epistemology and methodology of explanation, whose holistic, unificatory, and highly contextual character has no reflection in Kim's "conservatively metaphysical" conception of causation. Whether this idea is itself ultimately defensible is, of course, another matter.

Really taking metaphysics seriously

Barbara Montero

Department of Political Science, Economics and Philosophy, The College of Staten Island of the City University of New York, Staten Island, NY 10314.
barbara@antinomies.org <http://barbara.antinomies.org>

Abstract: Ross & Spurrett (R&S) fail to take metaphysics seriously because they do not make a clear enough distinction between how we understand the world and what the world is really like. Although they show that the behavioral and cognitive sciences are genuinely explanatory, it is not clear that they have shown that these special sciences identify properties that are genuinely causal.

Ross & Spurrett (R&S) claim to be taking metaphysics seriously, but I doubt metaphysicians such as Kim would agree. Taking metaphysics seriously means in part making a distinction between