

David Yates: Powerful Qualities as the Key to Emergent Downward Causation

In this paper I argue that some physically realized qualitative properties have their causal roles solely in virtue of being the qualities they are, and not in virtue of the powers bestowed by their physical realizers on a given occasion. This theory requires a broad notion of physical realization that encompasses the realization of properties such as structure and shape, as well as functional properties. I appeal to the causal role of molecular structure in support of my position, and suggest that powerful qualities of this kind exhibit emergent downward causation without violating physical realization, or the causal closure of the broadly physical. The resulting theory, I suggest, offers far better resources for explaining the autonomy of the special sciences than traditional alternatives such as functionalism and supevenience emergentism.