How Multiple Realization is Possible

Kenneth Aizawa*[1]

[1]Rutgers University, Newark – Department of Philosophy Rutgers, The State University of New Jersey, Newark Campus Conklin Hall, Room 410 175 University Avenue Newark, NJ 07102, United States

Abstract

In "Special Sciences," Jerry Fodor claimed that "we could, if we liked, require the taxonomies of the special sciences to correspond to the taxonomy of physics by insisting upon distinctions between the natural kinds postulated by the former wherever they turn out to correspond to distinct natural kinds in the latter" (Fodor, 1974, p. 112). In this paper, I document a clear case in which vision scientists have had the opportunity to adopt this taxonomic practice, but have not. Instead, I will describe three other ways in which vision scientists relate the taxonomy of biology to the taxonomy of vision science. First, vision scientists sometimes postulate properties within which they will admit individual differences in vision science properties that are explained by differences in biological properties. Second, they sometimes discover that it is possible for two sets of biological properties to differ so that the differences between them cancel each other out for the vision science property. Third, they sometimes discover that small variations in biological properties induce variations in some vision science properties but not others. Each of these three taxonomic strategies reveals how multiple realization is possible.

*Speaker