

John S. Wilkins and Malte C. Ebach: The Nature of Classification: Relationships and Kinds in the Natural Sciences

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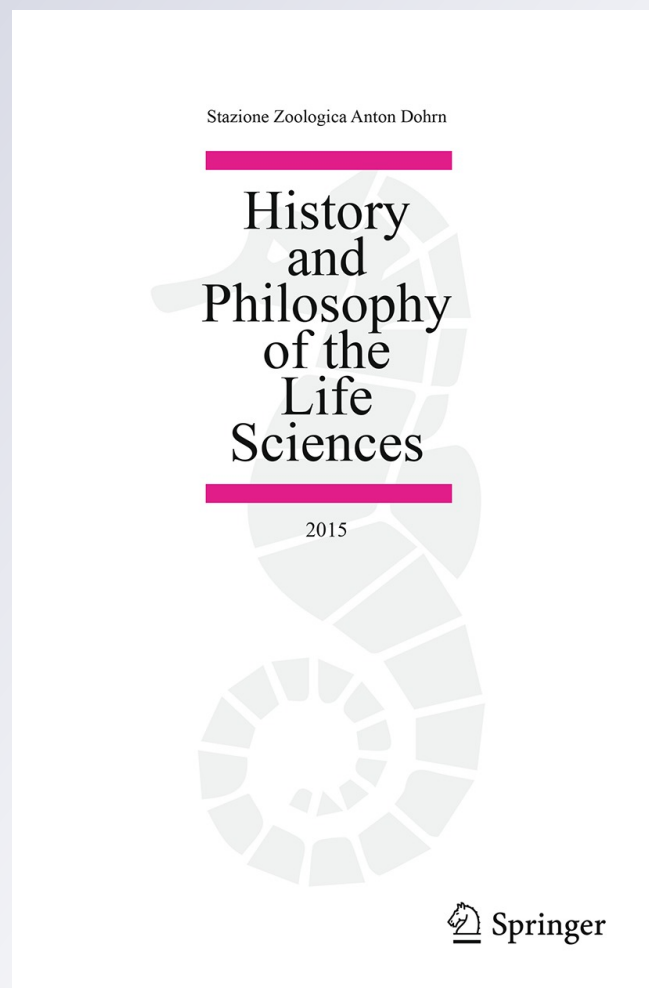
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JOHN S. WILKINS and MALTE C. EBACH: *The Nature of Classification: Relationships and Kinds in the Natural Sciences***Palgrave, Macmillan, 2014, pp., vii + 197, Price £60/\$100.00****Catherine Kendig¹**Published online: 27 August 2015
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John Wilkins and Malte Ebach respond to the dismissal of classification as something we need not concern ourselves with because it is, as Ernest Rutherford suggested, mere “stamp collecting.” They contend that classification is neither derivative of explanation or of hypothesis-making but is necessarily prior and prerequisite to it. Classification comes first and causal explanations are dependent upon it. As such it is an important (but neglected) area of philosophical study. Wilkins and Ebach reject Norwood Russell Hanson’s thesis that classification relies on observation that is theory-laden and deny the need for aetiological assumptions and historical reconstruction to justify its arrangement. What they offer instead is a significant (albeit controversial) contribution to the philosophical literature on classification, a pre-theoretic *natural* classification based on the observation of patterns in data of ready-made phenomena.

Their notion of ready-made phenomena rests on a conception of tacit knowledge or know-how. This is evident in their distinction between strong Theory-dependence and naïve theory-dependence. Their small t-theory-dependence permits patterns of observation that facilitate know-how but does not rely on a domain-specific explanatory theory of their aetiology. Wilkins and Ebach suggest classification differs from theory building in that it is passive (whereas theory building is active). Classification is possible just because it does not require the sieve of theory to capture classes that are “handed to you by your cognitive dispositions and the data that you observe” (p. 18). Finding regularities *sans*-theory is just something we do and can do without any prior theory about the underlying causes or origins of the

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resultant regularities. Luke Howard's classification of clouds serves as an exemplar of a passive, theory-free classification system and the periodic table and the DSM help to illustrate this type of non-aetiological patterning.

A recurrent theme is the nature of naturalness. For Wilkins and Ebach, the conception of naturalness is not one that is based on the generation or discovery of natural kind categories popular in both the traditional metaphysics of Mill and Wittgenstein as well as updated notions within philosophy of biology such as Boyd's Homeostatic Property Cluster kinds. Instead, Wilkins and Ebach define the naturalness of classification as the falling into hierarchical patterns, aligning the search for natural arrangement with the aim of systematics, and as something that is grounded in a cognitive task or activity. However, they leave the question of realism v. antirealism open. "In natural classification...we must have real relations no matter how we might interpret 'real'" (p. 70). There is tension with regard to their ontological commitments as they vacillate between constructive, operationalist, and realist approaches. Wilkins and Ebach initially define *real* as that which is causal and important (pp. 70–71), and later as that which "depends in no way upon a mind or observer" (p. 122). This makes their claim that there was "no real theory involved [in the pre-Darwinian classifications of Jussieu and Adanson]" (p. 64) difficult to interpret.

Early chapters provide the historical background and philosophical motivation necessary for the main project—to introduce a theory neutral classification system they name 'Radistics'. Radistics is not grounded on any particular discipline or theory. Its purpose is to represent classification *qua* classification as a general cognitive enterprise applicable to fields from pedology to psychiatry. Wilkins and Ebach's formulation relies on the tools of biological systematics as a guide, rather than an essentialist notion of natural kinds, prototypes, exemplars (Hacking), theories of meaning (Putnam), or family resemblances (Wittgenstein). Extricating pattern from the process of evolution and phylogenetic reconstruction, Wilkins and Ebach's Radistics can be best described as generalized cladistics, one clearly influenced by Gareth Nelson's pattern cladism. In the activity of classifying, new specimens are treated as type specimens (like *ersatz* holotypes) and the patterns are the relationships that are observed between those and other previously observed specimens. Some specimen is declared to be of a different type because it doesn't fit the patterns we made using previous type specimen classifications. It needs to be put into a different type, and so belongs to a different taxon. Doing so relies on a pattern of three specimens (or more generally 'units'), two of which relate more closely with each other than they do with the third. It is a three-unit statement of relatedness. In cladistics, a natural pattern is one that is monophyletic. Monophyly is redefined within the neutral terminology of Radistics as 'Formism', referring to "the relationship between two or more manifestations of the same formae" (p. 148). Formism is intended to be a term that captures both transformational and taxic conceptions of monophyly currently in use within biology (e.g. stem group, a single branch of a phylogenetic tree, all and only descendants of the most recent common ancestor), but can also serve as a litmus test for what qualifies as natural classification outside of biology.

Wilkins and Ebach's pattern cladist-inspired approach clearly aims to be objective and empirical, rather than subjective and theory-laden. They conceive of

classification as the radogramization of the world, washed of the messy business of phylogenetic theorizing that sullies our access to it. To Theodosius Dobzhansky's famous 1973 essay entitled, "Nothing in Biology Makes Sense Except in the Light of Evolution", Wilkins and Ebach's *The Nature of Classification* is a retort—that something can—and that something is classification. The light of theory is not necessary to understand the role of natural classification. Their excision of historical reconstruction, evolution, development, and other aetiological processes from the patterns they produce is, (like the pattern cladism that inspires it), controversial. Wilkins and Ebach are well aware of this and address worries that doing so opens the door to creationism and typology (p. 150). Although those opposed to pattern cladism may be unconvinced by Wilkins and Ebach's generalized schema of Radistics, their constructive contribution to the historical and philosophical discussion of classification will undoubtedly motivate new critical discussion of an area that has been neglected. Wilkins and Ebach present an ambitious but well-motivated discussion for a theory-free classification which, if successful, would circumvent the problematic ladenness of observation. As such, *The Nature of Classification* succeeds in extending discussion of philosophy of classification beyond that of biological systematics and in forging a neutral terminology with which to do so.