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# Type-specimens and the (historical) metaphysics of taxonomic practice

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## Abstract

### **Type-specimens and the (historical) metaphysics of taxonomic practice**

Type-specimens have recently come under close scrutiny by historians and philosophers of science. Historians have highlighted the remarkable shift in meaning and function type-specimens underwent in the nineteenth century, which has culminated in their rather "puzzling, even paradoxical" metaphysical status in today's taxonomic practice (Daston, 2004). Philosophers who have—independently—also zoomed in on the metaphysical status of contemporary type-specimens have been reaching similar conclusions (Haber, 2012; Levine, 2001). From both sides it is argued that type-specimens fulfill a role in current taxonomic practice that cannot be captured by standard philosophical accounts of reference and designation, for various reasons.

I argue that this conclusion is false. There is nothing puzzling, let alone mysterious, about the current metaphysical status of type-specimens or about how they acquired this status. On the historical side, I show that the apparent paradox arises by viewing the history of type-specimens through the lens of a too restrictive historical-epistemological framework (Daston & Galison, 2007). Revising the history of type-specimens, shows reciprocally how that framework can be improved. On the philosophical side, I argue that the latest contribution to the debate about whether or not types necessarily belong to their species, by (Haber, 2012), is specious. Type-specimens do not present a complication for the theory of causal reference and rigid designation, as Haber argues. To the contrary, I will show that type-specimens actually satisfy this theory better than the reputed exemplars from the literature: H<sub>2</sub>O and the standard meter bar.

In short, type-specimens can illuminate both historical and philosophical schemes.

Daston, L. (2004). Type specimens and scientific memory. *Critical Inquiry*, 31(1), 153–182.

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Haber, M. H. (2012). How to misidentify a type specimen. *Biology and Philosophy*, 27(6), 767–784.

Levine, A. (2001). Individualism, type specimens, and the scrutability of species membership. *Biology and Philosophy*, 16(3), 325–338.

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