

First-Order Logics for Comparative Similarity

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I am inclined to suspect, from certain data, that the ultimate philosophy of difference and likeness will have to be built upon experiences of intoxication, especially by nitrous oxide gas, which lets us into intuitions the subtlety whereof is denied to the waking state.

— [9], p. 531n

I If we speak of *degrees* of similarity, what kinds of judgment are we assuming to make sense?

It will be argued that the necessary and sufficient condition for there to be degrees of similarity is that there should be a four-termed relation of comparative similarity—*w* resembles *x* at least as much as *y* resembles *z*—obeying certain constraints. Of course, nothing turns on how we use the *words* ‘degree of similarity’. Rather, the point is to distinguish the different levels of ideological commitment (in Quine’s sense) which different kinds of judgment of similarity involve.

In recent years the concept of similarity *tout court* has suffered important vilification (most notably at the hands of Wittgenstein and of Goodman [7]), whose upshot is frequently the claim that it should be replaced by the family of concepts of similarity in various respects. This paper is neutral over such claims; its results are equally valid for judgments of similarity *tout court* and for judgments of similarity in a given respect. What is more, however little our judgments of similarity reflect independently existing structures, we can hardly avoid making them: we should know how much we are letting ourselves in for, and when, in order to understand ourselves (for the psychological ubiquity of similarity, cf. [3], p. 127 and [18], p. 327).

Jean Nicod writes: “A relation which admits degrees is a three-termed relation, for example: ‘*a* resembles *b* more than *c*’” ([13], p. 61). David Lewis suggests an opposed view: he writes as though talk of degrees of similarity is metaphorical unless they can be measured numerically, and he contrasts such

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