

a central feature reduced ease-of-imagining judgments more than removing a peripheral feature no matter what type of relation bound features.

The intent of Studies 3a and 3b was to demonstrate a null hypothesis, no effect of relation type. Proving the null hypothesis is well-known to be highly problematic. That is one reason that we went about replicating the effect in Study 3b. In an experiment that we will not report here, we have replicated it once again. Note that we found no effect of relation type using a design that was powerful enough to show an effect of feature centrality.

DISTINGUISHING CONCEPTUAL AND CATEGORY CENTRALITY

Study 4: Mutability Versus Name Centrality⁶

A long history of argument in philosophy (Wittgenstein, 1953) and cognitive science (e.g., Malt, 1994; Rosch, 1978) argues that few natural concepts have defining features, at least outside the domain of mathematics (for a review, see Lakoff, 1987). Alternative views have, however, encountered difficulty explaining why people tend to call bats “mammals” and ostriches “birds” without appealing to defining features. A major motivation for the current work is to replace the dichotomous defining/non-defining distinction by a dimension of conceptual centrality that permits gradations. We believe that features differ by degree in the amount of structural support they provide for a concept.

But the notion of defining feature lurks. Imagine a blue beret. Now transform that blue beret so that it is yellow. This is easy. Blueness is a mutable property of our concept of blue berets because nothing but the beret’s color is violated when the feature is changed. However, a blue beret that is yellow is not really a “blue beret” at all. Blueness is an essential property of “blue berets.” So some features are essential with regard to delimiting the extension of a category and deciding whether a label is applicable without being immutable. In this sense, the centrality of a feature in a category can be distinguished from the feature’s conceptual centrality.

Despite this distinction between conceptual and category centrality, the two dimensions are highly correlated. The features most responsible for binding the internal structure of a concept are generally also the ones that serve to delimit the corresponding category. However, we have pointed out one class of exceptions to this rule: features that distinguish a specific category from other similar categories, as “blue” distinguishes *blue beret* from other berets. The two types of centrality are dissociable because, when naming, sometimes we wish to discriminate an object from others that share immutable properties with it. In particular, features are more likely to be critical for naming but nevertheless mutable when discourse concerns specific—as opposed to abstract—categories. This is because, at lower levels of abstraction, categories that share a superordinate also tend to share dependency structure. For example, one kind of sedan has much the same dependency structure as another kind of sedan. Ford sedans differ in important ways from Nissan sedans, but the differences are not in their most immutable properties. Both have engines, seats, steering wheels, etc. The features that are critical for determining whether an object is a Ford as opposed to a Nissan include some that are central to the category without being conceptu-