conceptual and naming. One possibility is that a feature is central for naming in proportion to its relative frequency; specifically, its category validity, the probability of the feature given the category. In contrast, we propose that a feature is conceptually central (immutable) to the extent that the feature is depended on by others.

One implication of this study is that feature centrality is relative to the function being served by the feature. Concepts have multiple facets. The importance of a feature depends not only on the identity of the feature and its relation to other conceptual features, but also on the goal of the agent using the concept. In particular, using a concept to name an object requires different information about the internal structure of the concept than does transforming the concept in the service of a conceptual task like imagination.

Study 5: Mutability versus Variability

Study 4 demonstrated a dissociation between judgments of mutability and of counterfactual naming. To the extent that naming judgments reflect beliefs about category and not conceptual structure as essentialists like Putnam (1975) would have us believe, this result represents a dissociation between conceptual and category centrality. Study 5 pursues this distinction.

In the introduction, we pointed out that mutability and variability are flip sides of the same coin. Mutability refers to how much the internal structure of a concept allows a feature to transform, variability to the likelihood of transformation over a set of instances. Therefore, the relation between mutability and variability judgments should give us some insight into whether people focus on the internal structure of a concept or its extension when thinking about transformability.

Because of their common reference, judgments of mutability and variability should be highly correlated, as they were in Study 1, and Equation (1) should show reasonable fits to variability judgments, as it did in Study 2. However, the two variables are not the same. Features can be mutable and yet tend not to vary because of circumstance. A banana could be straight even if no straight bananas exist (Medin & Shoben, 1988). In America, men have rarely worn skirts although, conceivably, fashions could change dramatically. Because mutability and variability are different, the question arises as to how they influence one another. Most pertinent here, do mutability judgments measure assessments of the internal structure of a concept, as our model supposes, or do they measure assessments of the actual frequency of category instances missing the critical feature; i.e., do people substitute judgments of variability for mutability? To address this question, Study 5 attempts to show, not only that mutability judgments vary as expected when features' dependencies are manipulated, but that such a manipulation can reverse judgments of frequency; i.e., that frequency judgments are sensitive to dependency structure.

Spalding and Ross (1994) report suggestive data. Using an artificial category learning task, they had participants rank features for their importance in category membership and also by their frequency. They found that features rated more important tended to be judged more frequent than less important features, even though they were not. Most of our features are present in more than 50% of category instances. In such a situation, high frequency fea-