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# Social Norms, Discrete Choices, and False Dichotomies

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## Social Norms, Discrete Choices, and False Dichotomies

#### Comments

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# Social Norms, Discrete Choices, and False Dichotomies

We commend Tucker for a well-executed study that successfully uncovers rich relationships between contexts and behavior. We agree that equating ethnic and spatial effects with social learning and wealth effects with individual learning is to force a false dichotomy. These two hypotheses need not be mutually exclusive; individual and social learning may both be active at the individual level regardless of whether choices conform to norms. We would like to add further caution to these persistent and fallacious either/or debates by illustrating additional reasons why the presence and absence of social effects is tenuous evidence (at best) for a causal pathway between social learning and individuals' discrete choice behavior.

Suppose we failed to find effects of some spatial groupings on some choice variable. This does not imply an absence of social learning. There are at least two good reasons why social learning will not always produce evidence of social norms in spatial groupings: (1) social learning also occurs according to irregularly distributed network patterns (e.g., kin networks) that crosscut space and (2) even if and when social learning occurs in spatial groupings, choices influenced by learning can be very sensitive to the timing and sequence of sampled information.

Social learning, whether observed in birds, fish, or mammals (see Gibson and Hoglund [1992] and Pruett-Jones [1992] for reviews), is not an indiscriminate process. Instead, these studies demonstrate that learning strategies are sensitive to cues directing organisms when to learn from others and who to learn from (Laland 2004). We expect that human foragers, who interact most frequently with affinal and consanguineal kin (e.g., see Hill et al. 2011), will differentially acquire information about things like monetary choices from familiar kin. Using logistic regressions, we analyzed unpublished survey data from Schniter's dissertation of Tsimane nominations of experts (made by judges competent in the skill) and found that kinship is a significant predictor of individuals' nominations even after detailed accounting for spatial relationships. With kinship and villages of nominees and judges accounted for, additional spatial variables (domicile clusters or exact domiciles) contribute little to explained variance ( $R^2$  increases by 0.0024). By contrast, with all spatial variables in the model, adding kinship explains variance by six times more. Tucker observes that in his sample individuals "intermarry freely" and "genealogies crosscut the three identities." We suspect that by controlling for kinship Tucker might explain even more relational variance and further clarify how strategic and social variables relate to individual decisions.

Tucker suggests that some subjects did not understand all tasks. Where participants are uncertain about the task and best decisions but where they can sequentially sample others' choices, "information cascades" (Bikhchandani, Hirshleifer, and Welch 1992, 1998) can produce "norms" that trump the influence of prior private information. Conformism under cascades is sensitive to the timing of modal choice sequences (earlier revelation causes stronger cascades). Norms produced this way are thus idiosyncratic and fragile (differentially affected by order effects). If Tucker's data are a product of cascades, it could manifest as emergent norms in some places and times but not in others.

Three of Tucker's capital measures (human, social, and material wealth) are reported to covary with income, and other correlations among Tucker's explanatory variables are plausible but not reported. When subsets of explanatory variables in models are sufficiently correlated, variables in the subset can be individually insignificant while the subset variables are jointly significant. Overall model fit does not suffer, but understanding can be compromised. For example, log income has one of the largest effect sizes in Tucker's table 4, yet it is insignificant: perhaps it and the other strategic variables would be jointly significant. We would have liked to see a correlation table for Tucker's strategic variables and *F*tests of joint significance for subsets of correlated variables to aid interpretation of the statistical results.

We close with two cautions. First, experiments reveal strong randomness of discrete risky choice (Wilcox 2008); Camerer (1989) described such choices as "distressingly close to . . . random" (81). Tucker's scrupulous attention to the reliability of independent measures is excellent. But the low reliability of dependent measures-single-choice indicators-means that 350 observations will not sort out the effects of three dozen explanatory variables with great replicability. Second, monetary risk preferences may not share significant variance with risk preferences over other outcomes (e.g., health, status, or reproductive outcomes). The "domain generality" of risk preference is contentious throughout the social and cognitive sciences, with results both pessimistic (e.g., Berg, Dickhaut, and McCabe 2005; Hanoch, Johnson, and Wilke 2006; Hershey and Schoemaker 1985) and optimistic (e.g., Barsky et al. 1997; Dave and Saffer 2007; Schmidt 2008). While male violence and competitive risk taking predicted by Wilson and Daly (1985) may help explain risky choices (like sleeping out in a forest, going to sea, and going on cattle raids), they may covary little with monetary risk choices.

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I commend Tucker for employing multiple currencies to measure risk and time preference and defining multiple scales of social identity to which individuals might conform in norms and practices. In addition, testing multiple alternative hypotheses with the same data is all too rare in anthropology, as he notes, and the tests here are rigorous (if a bit numbing in their thoroughness). I would have preferred a set of tests more tightly tied to deductively generated expectations, but this is certainly a sophisticated analysis by the standards of sociocultural anthropology. Tucker links his analysis to