Reply to Martin and Shieh

Reading Shadows on Plato's Cave Wall

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With a large data set like the General Social Survey, with thousands of variables and tens of thousands of cases, it is always possible arbitrarily to recode these variables, reverse-code those, drop these cases, and retain those, in order to make any findings disappear, which is what Martin and Shieh (2003, henceforward M&S) have done here. Let's assume for the moment that they are completely right and I am completely wrong. Two questions remain.

First, I originally tested and supported my stochastic learning theory of voter turnout in my 1998 *Journal of Politics* article (Kanazawa 1998), with an entirely different data set (American National Election Studies) on entirely different elections (midterm congressional elections, as well as presidential elections), with an entirely different de-

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pendent measure (officially-validated voting, rather than self-reported voting), and using an entirely different method of statistical estimation (categorical contrasts, rather than interaction terms). If the empirical support for the theory in my 2000 *ASR* article (Kanazawa 2000) is an artifact of "numerous coding irregularities" (p. 153), as M&S claim, how would they explain the fact that the theory was strongly supported with a data set for which *none* of the issues they raise in their comment are relevant?

Second, at the cognitive microfoundation of the stochastic learning theory of voter turnout is citizens' gross overestimation of their personal influence on electoral outcomes, where each citizen feels like he or she single-handedly brought about the victory or defeat of a favored candidate alone. This cognitive illusion probably stems from our evolved psychological mechanism adapted to the situations of collective decision-making in the ancestral environment, where each person did have a strong influence on the collective outcome (Kanazawa 2001:1142–44). The General Population Survey of the Social Sciences conducted in Germany in 1998 asked its respondents the following question: "Please, tell me to what extent you personally could exert influence in politics when you participate in elections." On a 7-point scale from 1 (not at all) to 7 (very strong), more than one quarter of the respondents (26.3 percent) chose 7 (Opp 2001:368, table 2). The mean score of the 3,234 respondents was 4.99. Only 5.7 percent chose the mathematically correct answer of 1. Opp's analysis therefore supports the cognitive microfoundation of the stochastic learning theory of voter turnout with a German population. How would M&S explain that?

Like the shadows on the wall in Plato's "Allegory of the Cave," empirical data only imperfectly reflect the underlying reality, the objects carried by men whose shadows are cast on the wall by the fire. Our job as scientists is to make sense of the objects, not the shadows. No one (neither M&S nor I) can directly look at the objects; we must infer their identities from the shadows they cast. In this endeavor, the more shadows of an object we see, the more accurate our inference to its identity is likely to be. It would be very dangerous to attempt to infer the identity of the object from a single shadow.

Contrary to popular myth, there are no "crucial experiments" in science. Nor are there "crucial" empirical tests. Neither my 2000 study alone nor M&S's reanalysis provides a crucial test of the stochastic learning theory of voter turnout. The fate of a scientific theory rests on the cumulative weight of evidence. M&S spent an awful amount of time and energy making sense of a single shadow, but I believe it is unwise to make sweeping pronouncements like they do in their title (no evidence for stochastic learning in voter turnout) on the basis of a single shadow. Even if one entirely discounts my 2000 *ASR* article, the cumulative weight of evidence from Kanazawa (1998) and Opp (2001) still favors the stochastic learning theory of voter turnout. But let's wait to hear from other researchers and their studies.

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