Groups weight outside information less although they shouldn't: Response to Shultze et al. (2013)

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By suggesting that dyads should give less weight to outside advice than individuals should, Shultze et al. raise important questions regarding whether and when collaboration outperforms individual judgment. The authors argue that normatively the judgments of dyads should be weighted twice as heavily as those of individuals because the former are made up of two independent inputs, whereas the latter is a product of solitary contemplation.

The problem however, is that estimates produced by dyads are not *actually* made up of two independent inputs. Prior work suggests that group interaction creates shared perspectives, viewpoints, emotions, and cognitions, such that any member's contribution reflects, and is influenced by the group's (Kenny, Mannetti, Pierro, Livi, & Kashy, 2002; Salancik & Pfeffer, 1978). Thus, group members should not be treated as independent individuals, but rather as interdependent contributors (Nezlek & Zyzniewski, 1998; Raudenbush & Bryk, 2002).

In Minson & Mueller (2012), dyad members interacted without initially committing to individual estimates – a common practice in many real-world judgment contexts. How did such joint estimation affect their judgments? To answer this question, we first compared the error of dyads' initial estimates with the error of estimates that would have resulted if participants in the *individual judge/individual advisor* condition averaged their judgments with those of their advisor. We found that dyads' estimates were less accurate (M = 40.4 percentage points) than those produced by averaging the estimates of two independent individuals (M = 34.4 percentage points), $b = -.060$, $z = -2.19$, $p < 0.03$, suggesting that dyads' judgments should not be weighted as heavily.

Furthermore, we can calculate the distance that participants *should* have yielded to peer input on any given item in order to reach the correct answer. In the conditions where dyads received input from dyads and individuals received input from individuals the result has to be (and is) 50%. However, the conditions of interest are the ones where dyads received input from individuals and vice versa. In those cases, reaching the correct answer would have required that dyads yield 52.9% of the distance toward the estimates of individuals, and individuals yield 47.1% toward the estimates of dyads! These weights are not significantly different from 50% (or from each other), and are far from the 66.7%/33.3% benchmark proposed by Shultze et al. Furthermore, if these weights (which account for the non-independence introduced by making judgments jointly), are used as the "rational weights" in Table 1 of Shultze et al., the conclusions would be the same as those in Minson & Mueller: namely, that dyads are more biased than individuals in their use of advice.

These data do not allow us to address the psychological processes that lead to such rapid loss of independence on the part of dyad members. Although the fact that the judgments of interacting group members are not independent, it is somewhat surprising that such judgments do not more closely resemble the sum of their independent parts. The Shultze et al. commentary exposes a need for future research in this domain. Researchers, managers, and consumers would benefit from a deeper understanding of when, why and to what extent are two heads *truly* better than one.

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