

Abstract: Research on belief formation has produced contradictory findings on whether and when communication between group members will improve the accuracy of numeric estimates such as economic forecasts, medical diagnoses, and job candidate assessments. While some evidence suggests that carefully mediated processes such as the “Delphi method” produce more accurate beliefs than unstructured discussion, others argue that unstructured discussion outperforms mediated processes. Still others argue that independent individuals produce the most accurate beliefs. This paper shows how network theories of belief formation can resolve these inconsistencies, even when groups lack apparent structure as in informal conversation. Emergent network structures of influence interact with the pre-discussion belief distribution to moderate the effect of communication on belief formation. As a result, communication sometimes increases and sometimes decreases the accuracy of the average belief in a group. The effects differ for mediated processes and unstructured communication, such that the relative benefit of each communication format depends on both group dynamics as well as the statistical properties of pre-interaction beliefs. These results resolve contradictions in previous research and offer practical recommendations for teams and organizations.