

Critique Paper

Paula Wellings

Cramton, C. D. (2001). The mutual knowledge problem and its consequences in geographically dispersed teams. *Organization Science*, 12(3), 346-371.

The paper I have chosen to critique is the winner of the 2002 Best Published Paper Award, given by the Organizational Communication and Information Systems division of the Academy of Management. This paper is exemplary from the perspectives of theory utilization and innovation, methodological descriptiveness, and writing style. Cramton successfully leverages existing frameworks for mutual knowledge and attribution theory to generate new causal mechanisms for how dispersed teams succeed and fail at establishing mutual knowledge when utilizing 'leaky' communication technologies across geographic distance. Presenting research that characterizes the five key problems geographically dispersed teams faced when attempting to conduct work together, Cramton is able to illuminate how these problems develop over the course of the team-task interaction, providing potentially causal arguments for the progression of group dynamics over time. The data analysis procedures for this work is clearly documented and explained. The choice to provide this documentation is helpful to young scholars and provides credibility to the primarily qualitative approach. In addition to developing theoretically relevant work and a rigorous description of methods, the paper is highly readable and comprehensive.

Perhaps the greatest limitation of this paper is Cramton's choice to not address team diversity and cultural issues outside of the notion of geographic boundaries. It may be that while the student sample included international student and international locations, that there were not significant cultural differences between students with regards to English as a first language, cultural notions of time, cultural beliefs regarding interaction norms, and cultural beliefs

regarding learning and student performance. However, given that the primary mode of communication for the teams was email, presumably in English, it is possible that there were cultural factors that influenced how teams constructed mutual knowledge or failed to do so. Cramton's reliance on student performance data from only the two American universities, and only George Mason University students' analysis of their team activity for verification of email data interpretation also suggests that cultural differences were not considered relevant in the processes of attribution and construction of mutual knowledge.

Would an approach that considered how cultural differences influence attribution affect Cramton's findings? It may be that different cultural groups have somewhat distinct schema for the identified problems such as interpretation of silence, information salience, rate of information access, and emphasis on contextual information. Other kinds of diversity which might also influence initial schema of team members include subjects' familiarity with use of communications technology for dispersed work activities, expertise in dispersed work environments, and previous cross-cultural collaboration experiences. It might be that some of Cramton's findings would lack significance if cultural context was held constant.

Cramton cites the findings of Jarvenpaa and Leidner (1999) and Jarvenpaa et al. (1998), that:

...trust in dispersed teams was predicted most strongly during the early phases of team activity by perceptions of other members' "integrity," by which they mean "adherence to principles thought to make the trustee dependable and reliable" such as demonstrated work ethic, fair dealings, and consistency (p. 365, *ibid*).

Cramton argues that if human and technical errors interrupt the conveyance of this information early on, these early failures are likely to be interpreted as failures of personal reliability. Given the speed in which trust is established, norms are formed, and attributions are projected, it would

be helpful to know if issues of team diversity influenced how “integrity” was interpreted within each team.

A more minor limitation of this paper is the unqualified use of the term “cognitive overload”. Cramton states that “there is considerable evidence that when people work under heavy cognitive load, they become more likely to make personal rather than situational attributions (p.366, *ibid.*).” Cramton suggests that cognitive overload may be a useful measure for comparing dispersed and collocated teams. However, Cramton makes little attempt to specify what a cognitive load is, how a cognitive load might be distributed between tools and team members, and what metrics might be used to understand how cognitive load impacts team interactions? To know if cognitive load is a useful framework for understanding dispersed team interactions, it is necessary to push the concept from the fringe of jargon to a useful level of specificity.

The study described in this paper is situated within the classroom context. Given the general objective of the classroom to foster student learning, it may be of interest in future studies to consider if and how the study task facilitates student learning. Cramton does not consider learning outcomes in the current study, and she finds that the student teams’ processes and outcome products did not have a relationship. Teams that were more successful in constructing mutual knowledge did not necessarily produce better work than teams that were not successful in constructing mutual knowledge. This finding suggest that the study as a successful learning experience is somewhat ambiguous. Work that might compliment an investigation of student learning is Liang, Moreland, & Argote’s (1995) work on transactive memory. Using this framework, research could be undertaken to explore how dispersed teams might engage in explicit learning activities in order to foster task related forms of mutual knowledge.

Given my comments above, an obvious next step in this work is to consider the possible role that cultural and experiential diversity plays in the construction of mutual knowledge and situational and personal attributions in dispersed teams. Bettenhausen & Murnighan's (1985) work on how individuals enter into group activities with existing scripts for how interaction will take place seems particularly relevant to understanding how cultural and experiential diversity may impact team dynamics. The value of exploring cultural and experiential diversity is that without this additional perspective, the theories and findings introduced into the literature may suffer the blindness of assuming that all team members share the cultural norms of a single, dominant group.

References:

Bettenhausen, K. & Murnighan, K. (1985). The emergence of norms in competitive decision-making groups. *Administrative Science Quarterly*, 30, 350-372.

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Liang, D. W., Moreland, R. L., & Argote, L. (1995). Group versus individual training and group performance: The mediating role of transactive memory. *Personality and Social Psychology Bulletin*, 21, 384-393.