

# Ambiguity and Group Consensus

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## INTRODUCTION

*When you assemble a number of people to have advantage of their joint wisdom, you inevitably assemble with those people all their prejudices, their passions, their errors or opinion, their local interests, and their selfish views. From such an assembly, can a perfect production be expected?*

~ Benjamin Franklin, Constitutional Convention, September 15, 1787

Franklin's eighteenth century question foreshadows a basic concern for today's team-dominated business world. First, while individuals are still important, groups are becoming the de-facto unit of work for organizations today. Working cooperatively is becoming a necessity; working collaboratively is becoming paramount to career success. Second, as the work environment changes into a virtual work environment, it is important to know how groups deal with making decisions. In this light, before we ask groups to come to consensus in a virtual environment, we must be clear on how well they understand consensus itself.

In the technology-supported environment of group decision support systems (GDSS), the research results on consensus in groups have been ambiguous. The use of electronic medium often results in greater information flow and may increase the level of effort required in group meetings (Watson et al., 1988). A positive impact of the technology-supported environment (electronic meetings) on consensus has proven illusive. In meta-analyses of the research in this field, both Briggs et al. (1998) and Fjermestad and Hiltz (1999) offer concerns about the inconclusive experimental evidence for improvements in group consensus levels when supported by GDSSs.

This article asks a preliminary question: do we recognize consensus when they have achieved it, whether or not technology is involved? From a research perspective, it stands to reason that if researchers quantify consensus differently than people working in groups truly envision or perceive it, then ambiguous results—those we have encountered to date—should be expected.

## BACKGROUND

The popular press, such as Information Week (1999), Business Week (1999), Computerworld (1999) and Internet Week (1999), identify the fact that organizations today emphasize more and more group work and that teamwork skills are more and more important in recruiting. Pundits estimate that managers spend as much as 80% of their work time in meetings and working with groups. More detailed studies (Johansen, 1988) add additional confirming details. Johansen's list of driving forces contributing to the trend toward the increased use of business teams includes a decreasing number of middle managers, a trend toward contract work, an increasing geographic topology for companies, and more team-oriented projects becoming the model for business.

This last force is further confirmed in Peters and Waterman's book, *In Search of Excellence* (1982, p.127), where they record that the small group is becoming the main building block in those businesses with a "bias for action." Kilmann (1985) presents the team in the most positive light when he writes, "Generally, it is the team approach that will provide the most comprehensive source of expertise and information to solve complex problem, where synergy enables the team to contribute more than the sum of its members"

(p. 43). College recruiters and employers explicitly support this notion as they consistently rate teamwork skills and group skills high in their evaluation of future employees (Martz & Landof, 2000).

The *American Heritage Dictionary* defines consensus as 1) collective opinion, and 2) general agreement or accord. Whether it is labeled opinion, agreement or accord, this concept is subjective. In addition, the concept of “general agreement” can be viewed as a harmony within some defined tolerances. Harmony equals agreement. Once the tolerance of agreement is broken, then there is no consensus.

Juxtaposed against what consensus means are at least three important concepts of what consensus does *not* mean. First, it does not mean that there is “no disagreement” within the group. In fact, the above definition explicitly allows for disagreement with the concept of tolerances and variations within those tolerances. Senge (1990, p. 249) proposes that a “conflict of ideas” is better seen as an indicator of a team actually learning. Second, in some situations consensus may or may not be a goal of the group. In general, we assume that consensus on a decision is what the group wants. Kahai and Cooper (1999) go further including both agreement (“similar views and solutions about the problem,”) and acceptance (a willingness to “not resist the problem’s solution”) in their definition of consensus for their negotiation studies. But compromises made by moving “to the lowest common denominator” may be too tenuous to maintain. Finally, the level of consensus is not static and may change quickly. Members in a group meeting continuously update their perspective of that meeting’s current level of consensus based upon a myriad of new information received and processed during the course of the meeting.

A comprehensive definition of group consensus remains elusive. Some researchers prescribe consensus while others are willing to simply describe. Herrera-Viedma et al. (2005) use the following evaluation of consensus: the *consensus degrees* assess the agreement amongst all the experts’ opinions, and the *proximity measures* are used to find out how far the individual opinions are from the group opinion. Snizek and Henry (1990) calculate consensus using “judgment accuracy” in their studies on consensus and corresponding social interaction. In his “camping game,” Hare (1976) compared his subject’s final list of camping equipment to an “expert’s” list. In contrast, Bradford (1976) simply describes consensus as “the maintenance function” that

resolves the polarization that occurs around issues in meetings. Bradford’s consensus is more perception than Hare’s. In this sense, Hare’s consensus is more easily calculated while Bradford’s is probably not.

As stated earlier, summaries of research done on consensus in the area of GSS and electronic meeting systems (EMS) has produced inconclusive results (Gallupe et al., 1992; Miranda & Bostrom, 1994; Nunamaker et al., 1997; Dennis & Kinney, 1998). Two major meta analyses, Benbasat and Lim’s meta-analysis (1993) and Fjermestad and Hiltz’s (1999), evaluated group support research studies based upon the studies’ own definitions of consensus. Both concluded that the results showed a reduction in consensus with Fjermestad and Hiltz (1999) proclaiming “It is obvious that the relative lack of ability to reach consensus is a problem for groups using GSS.”

Four observations relating to our topic of group consensus can be extracted from the GDSS research. First, achieving group consensus seems to be a fundamental activity or goal to group problem solving. Second, developing a group consensus is a “high complexity” task, implying difficulty for groups to successfully complete. Third, developing consensus implies an inherent process conflict. Finally, group members may not be able to “operationalize” consensus in a deterministic heuristic.

Groups are expected to resolve an issue and to present that resolution in a collaborative way. Therefore, most problem-solving methodologies have the fundamental activity of consolidating individual perspectives into a group perspective in order to choose or create a “best answer.” For example, Churchman’s alternative assessment (1979), Mason and Mitroff’s stakeholder assessment (1981), Saaty’s priority scaling models (1980), and Fox’s voting methods (1997) all address verifying alternatives presented by group members before choosing or voting.

As we see in Table 1, authors divide problem-solving into two sub-processes geared to divergent and convergent activities. Benbasat and Lim (1993) use these processes, and their counterparts, in their meta-analysis to define task complexity. In their work, a task that undertakes both processes would be high complexity. Developing consensus usually requires these two sub-processes and under this definition can be stipulated a highly complex group task.

These first two observations lead to the third; and to what would seem to be a paradox of consensus. The

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