Small Groups, Collaborative Pitfalls, and Remedies

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Common Pitfalls with Small Groups

As more analysis is done collaboratively, the quality of intelligence products is increasingly influenced by the success or failure of small group processes. The various pathologies that afflict small group processes are well known and have been the subject of considerable research. One might reasonably be concerned that more collaboration will just mean more problems, more interagency battles. However, as explained here, it turns out that the use of structured analytic techniques frequently helps analysts *avoid* many of the common small group process pitfalls.

Some group process problems are obvious to anyone who has participated in trying to arrive at decisions or judgments in a group meeting. Guidelines for how to run meetings effectively are widely available, but most group leaders fail to follow them.[i] Key individuals are absent or late and participants are unprepared. Meetings are too often dominated by strong or senior personalities, while some participants are reluctant to speak up or to express their true beliefs. Discussion tends to get stuck on several salient aspects of a problem, rather than covering all aspects of the subject. Decisions may not be reached, and if they are reached, may wind up not being implemented.

> *"If you had to identify, in one word, the reason that the human race has not achieved, and never will achieve, its full potential, that word would be meetings."*[ii]
>
> --Humorist Dave Barry

Other problems that are less obvious but no less significant have been documented extensively by academic researchers. There are pressures toward consensus, so that if some reasonably satisfactory solution is proposed that all members can agree with, this ends the discussion without further search to see if there may be a better answer. Such a decision often falls short of the optimum that might be achieved. A phenomenon known as group "polarization" leads, under certain predictable circumstances, to a group decision that is more extreme than the average group member's view prior to the discussion. "Social loafing" is the phenomenon that 1people working in a group will often expend less effort than if they were working to accomplish the same task on their own. In any of these situations, the result is often an inferior product that suffers from a lack of analytic rigor.

Academic studies show that "the order in which people speak has a profound effect on the course of a discussion. Earlier comments are more influential, and they tend to provide a framework within which the discussion occurs."[iii] Once that framework is in place, discussion tends to center on that framework to the exclusion of other options.

Much research documents that the desire for consensus is an important cause of poor group decisions. Development of a group consensus is usually perceived as success, but, in reality, is often indicative of failure. Premature consensus is one of the more common causes of suboptimal group performance. It leads to failure to identify or seriously consider alternatives, failure to examine the negative aspects of the preferred position, and failure to consider the consequences that might follow if one is wrong.[iv] This is what is commonly called groupthink.

Improving Group Performance

Improvement of group performance requires an understanding of these problems and a conscientious effort to avoid or mitigate them. The literature on small group performance is virtually unanimous in emphasizing that groups make better decisions when their members bring to the table a diverse set of ideas, opinions, and perspectives. What premature consensus, groupthink, and polarization all have in common is a failure to adequately identify and consider alternative points of view. Laboratory experiments have shown that even a single dissenting opinion, all by itself, makes a group's decisions more nuanced and its decision-making process more rigorous.[v] "The research also shows that these benefits from dissenting opinions occur regardless of whether or not the dissenter is correct. The dissent stimulates a reappraisal of the situation and identification of options that otherwise would have gone undetected."[vi] The research also shows, however, that dissent must be genuine, not generated artificially as in some applications of the devil's advocacy technique.[vii] It should also be reasonable. If the person providing dissenting views is known to the group as a habitual contrarian or maverick, then his or her comments run the risk of being dismissed by the group regardless of merit.

Briefly, this means the route to better analysis is small groups of analysts who speak up and express a wider range of ideas, opinions, and perspectives. This can be achieved by the increased use of structured analytic techniques by these groups, the formation of more heterogeneous groups, and the use of computer-mediated communications when analysts are geographically dispersed.

The desired diversity of opinion is, of course, a double-edged sword, as it can become a source of conflict which degrades group effectiveness.[viii] It is not easy to introduce true collaboration and teamwork into a community with a history of organizational rivalry and mistrust. Analysts must engage in inquiry, not advocacy, and they must be critical of ideas but not critical of people.

The Perils of Advocacy

In a task-oriented team environment, advocacy of a specific position can lead to emotional conflict and reduced team effectiveness. Advocates tend to examine evidence in a biased manner, accepting at face value information which seems to confirm their own point of view and subjecting any contrary evidence to highly critical evaluation. Advocacy is appropriate in a meeting of stakeholders that one attends for the purpose of representing a specific interest. It is also "an effective method for making decisions in a courtroom when both sides are effectively represented, or in an election when the decision is made by a vote of the people." [ix] However, it is not an appropriate method of discourse within a team "when power is unequally distributed among the participants, when information is unequally distributed, and when there are no clear rules of engagement – especially about how the final decision will be made." [x] An effective resolution may be found only through the creative synergy of alternative perspectives.

The following table (see Figure 1) displays the differences between advocacy and the objective inquiry expected from a team member or colleague. [xi] When advocacy leads to emotional conflict, it lowers team effectiveness by provoking hostility, distrust, cynicism, and apathy among team members. On the other hand, objective inquiry, which often leads to cognitive conflict, can lead to new and creative solutions to problems, especially when it occurs in an atmosphere of civility, collaboration, and common purpose.

Figure 1. Advocacy versus Inquiry in Small Group Processes

	Advocacy	Inquiry
Concept of decisionmaking	A contest	Collaborative problem solving
Purpose of discussion	Persuasion and lobbying	Testing and evaluation
Participants' role	Spokespeople	Critical thinkers
Pattern of behavior	Strive to persuade others Defend your position Downplay weaknesses	Present balanced arguments Remain open to alternatives Accept constructive criticism
Minority views	Discouraged or dismissed	Cultivated and valued
Outcome	Winners and losers	Collective ownership

The Value of Structured Analytic Techniques

A team or group using structured analytic techniques is believed to be less vulnerable to these group process pathologies than a comparable group doing traditional analysis, because the techniques force analysts away from advocacy and toward inquiry.[xii] This has not been tested and demonstrated empirically, but the rationale is clear.

Such techniques work best when an analyst is collaborating with a small group of other analysts. In such circumstances, the techniques provide structure to individual thought processes as well as to the interaction of analysts within a small team or group. When structured analytic techniques such as What If? Analysis or Indicators are used this way, each step in the process prompts discussion among the group. This discussion generates and evaluates substantially more divergent information and new information than an analyst working alone or with a team that does not use structured processes. With any heterogeneous group, this reduces the risk of premature consensus, group think, and polarization.

Use of a structured technique also sets a clear step-by-step agenda for any meeting where that technique is used. This makes it easier for a leader to keep a meeting on track to achieve its goal. Some techniques such as Key Assumptions Check and Analysis of Competing Hypotheses (ACH) help analysts gain a clear understanding of how and exactly why they disagree. For example, many CIA and FBI users report that their preferred use of ACH is to gain a better understanding of the differences of opinion with other analysts or between analytic offices. The process of creating an ACH matrix requires identification of the evidence and arguments being used and how these are interpreted as either consistent or inconsistent with the various hypotheses. Review of this matrix provides a systematic basis for identification and discussion of differences between two or more analysts. CIA and FBI analysts also note that reference to the matrix helps to depersonalize the argumentation when there are differences of opinion.[xiii] In other words, ACH helps analysts learn from their differences rather than fight over them. In fact, structured techniques such as the Delphi Method and Structured Debate are designed to either stimulate or resolve *productive* conflict rather than emotional conflict.

Considerable research on virtual teaming shows that leadership effectiveness is a major factor in the success or failure of a virtual team.[xiv] Although leadership usually is provided by a group's appointed leader, it can also emerge as a more distributed peer process and is greatly aided by the use of a trained facilitator (see Figure 2). When face-to-face contact is limited, leaders, facilitators, and team members must make up for this by paying more attention than they might otherwise devote to:

- Articulating a clear mission, goals, tasks, and procedures for evaluating results.

- Defining measurable objectives with milestones and time lines for achieving them.

- Identifying clear and complementary roles and responsibilities.

- Building relationships with and between team members and with stakeholders.

- Agreeing on team norms and expected behaviors.

- Defining conflict resolution procedures.

- Developing specific communication protocols and practices.[xv]

Although most of these functions fall naturally to the designated team leader, a facilitator or a team member can also initiate a discussion on any of these points.

As illustrated in Figure 2, the interactions between the various types of team participants, whether analyst, leader, facilitator, or technologist, are as important as the individual roles played by each. For example, an analyst on a team will be most effective if he or she has subject matter expertise or knowledge that lends a new viewpoint, but also when the rewards for participating are clearly defined by the manager.

Figure 2. Effective Small Group Roles and Interactions
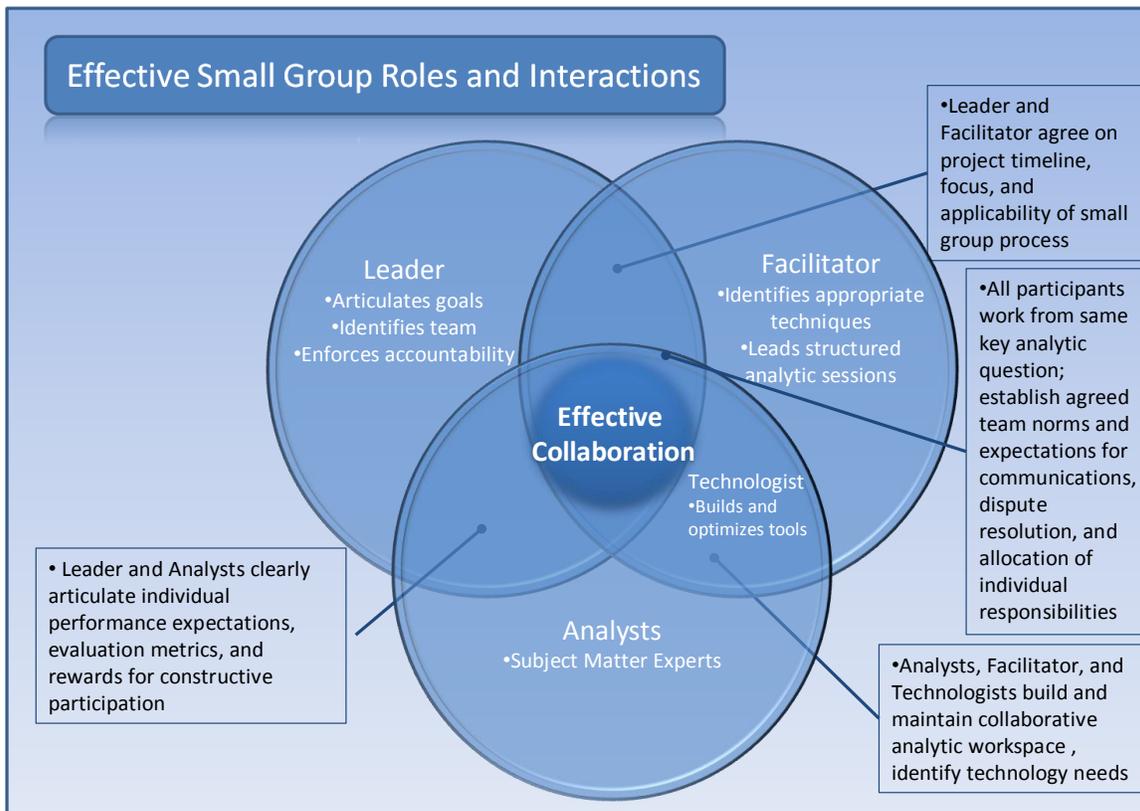
Likewise, a facilitator's effectiveness is greatly increased when the project goals, time line, and general focus are agreed upon with the leader in advance. When these roles and interactions are explicitly defined and functioning, the group can more easily turn to the more challenging analytic tasks at hand.

Implications for Training

As greater emphasis is placed on interagency collaboration and more work is done through computer-aided communications, it becomes increasingly important that analysts be trained in the knowledge, skills, and abilities required for facilitation and management of both face-to-face and virtual team or group meetings, including a strong emphasis on the management of conflict during such meetings. Training is more effective when it is available just before the skills and knowledge must be put to use. It is most effective when it is fully integrated into the work process with instructors acting in the role of coaches, mentors, and facilitators.

Training programs that emphasize these concepts would greatly enhance the prospects for interagency collaboration and the efficacy of virtual teams. Whenever a new interagency or virtual team or work group is formed, it would be appropriate to ensure that all members have the same training in the pitfalls of group processes, and are given assistance in the framing of performance expectations, standards of conduct, and conflict resolution procedures. Standardization of this training would accelerate the development of a shared experience and culture and reduce start-up time for any new interagency group.

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[i] J. Scott Armstrong, "How to Make Better Forecasts and Decisions: Avoid Face-to-Face Meetings," *Foresight,* 5, (Fall 2006).

[ii] Dave Barry, Dave Barry Turns 50 (Ballantine Books, 1999).

[iii] James Surowiecki, The Wisdom of Crowds (New York: Doubleday, 2004), 184.

[iv] Charlan J. Nemeth and Brendan Nemeth-Brown, "Better than Individuals? The Potential Benefits of Dissent and Diversity for Group Creativity," ed. Paul B. Paulus and Bernard A Nijstad, Group Creativity: Innovation through Collaboration (New York: Oxford University Press, 2003), 63-64.

[v] Surowiecki, Wisdom,183-184.

[vi] Charlan Jeanne Nemeth & Brendan Nemeth-Brown, "Better than Individuals? The Potential Benefits of Dissent and Diversity for Group Creativity," ed. Paul B. Paulus & Bernard A Nijstad, *Group Creativity: Innovation through Collaboration* (New York: Oxford University Press, 2003), 73.

[vii] *Ibid*, pp. 76-78.

[viii] Frances J. Milliken, Caroline A. Bartel, & Terri R. Kurtzberg, "Diversity and Creativity in Work Groups," ed. Paul B. Paulus & Bernard A Nijstad, *Group Creativity: Innovation through Collaboration* (New York: Oxford University Press, 2003), 33.

[ix] Martha Lagace, "Four Questions for David Garvin and Michael Roberto," *Working Knowledge for Business Leaders* (Harvard Business School Weekly Newsletter, October 15, 2001). Accessed June 13, 2007 from http://hbswk.hbs.edu/item/3568.html.

[x] *Ibid.*

[xi] Table is from David A. Garvin and Michael A. Roberto, 2001. "What You Don't Know about Making Decisions," Harvard Business Review, 79 (2001):108-116. Accessed March 2, 2009 at http://hbswk.hbs.edu/item/2544.html.

[xii] Examples of structured analytic techniques can be found in Randolph H. Pherson, *Handbook of Analytic Tools and Techniques* (Reston, VA: Pherson Associates, LLC, 2008) and Richards J. Heuer, Jr. and Randolph H. Pherson, *Structured Analytic Techniques for Intelligence Analysis* (Washington, DC Congressional Quarterly Press, forthcoming).

[xiii] Information provided by Randy Pherson and another senior Intelligence Community educator.

[xiv] Jonathan N. Cummings, "Leading Groups from a Distance: How to Mitigate Consequences of Geographic Dispersion," ed. Susan Weisband, Leading Groups from a Distance: Consequences of Geographic Dispersion (Oxford, UK: Routledge, 2007).

[xv] Sage Freechild, "Team Building and Team Performance Management." Accessed September 15, 2007 at http://www.phoenixrisingcoaching.com. This article is no longer available online.