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Getting to "We"

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DECK TEXT: Solidarity, not software, generates collaboration.

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Collaboration is a busy buzzword. Business people see it as pathway to greater innovation and competitive advantage. Scientists and engineers see it as a pathway to new discoveries and fields. Government people see it as a way of transcending political differences. The computing field has responded with numerous "groupware" technologies that support collaboration.

In a previous essay, we discussed messes, which are large, complex, seemingly intractable situations that no one can find a way out of [2]. The most tangled messes are called "wicked problems" because people can't even agree on what the problem is and because the solution will almost surely entail a disruptive innovation. Collaboration is essential for resolving messes.

Lewis Perelman cites infrastructure renewal as a wicked problem involving the clash of "green" and "blue" agendas [7]. Green represents the sustainability movement, which aims at environmental protection and resource efficiency; it is particularly concerned with energy-neutral designs for buildings and other infrastructure. Blue represents the security movement, which aims to protect against attacks and disasters; it is particularly concerned with critical infrastructure. The various players do not agree on the relative importance of the two perspectives. Each perspective leads to different conclusions about infrastructure renewal and how to spend resources.

The current climate for approaching infrastructure renewal is hardly collaborative. Each side is a political movement that is trying to "win" by gathering votes and poll percentages. The losers try to retain enough clout to wrest some compromises from the winner.

Is it possible that the players could come to think of blue and green as dimensions of a larger "blue-green space", rather than two opposing ends of a continuum? [3,7] How might we move past the competition to a genuine collaboration that designs the larger space in which both blue and green concerns are cared for?

We'll take a look here and see what you can do to achieve collaboration in your work.

Defining Collaboration

Collaboration generally means working together synergistically [6]. If your work requires support and agreement of others before you can take action, you are collaborating.

Coordination and cooperation are weaker forms of collaboration; neither requires mutual support and agreement. Coordination means regulating interactions so that a system of people and objects fulfills its goals. Cooperation is slightly less mechanical; it means playing in the same game with others according to a set of behavior rules. In this discussion, we use collaboration for the highest, synergistic form of working together.

Four levels of working together are listed in Table 1 along with examples of supporting groupware tools. We have listed tools at the highest levels at which they can consistently deliver the promised results. For example, chat is an information sharing technology; but it does not guarantee that participants will cooperate or coordinate on anything. An operating system is a coordination technology and a multiplayer game is a cooperation technology; but neither guarantees that its players will synergistically achieve a larger goal.

Although the information sharing technologies do not guarantee cooperation, coordination, or collaboration, their users sometimes develop impressive systems of practice. For example, the Faulkes Telescope is a facility that provides free access to robotic telescopes and an education program to encourage teachers and students to engage in research-based science education (http://faulkes-telescope.com). John Hagel and John Seely Brown see this as a fine example of a *creation net*, a (possibly collaborative) community that learns and invents together. Creation nets can be adopted and managed by organizations seeking to be more innovative [5]. Thus, a community practice can be harnessed and imitated even if no technology embodies it.

Table 1: Levels of Joint Action and Associated Tools

Category	Purpose	Groupware Examples
Information Sharing	Exchanging messages and data	blog chat content streaming corporate directories database sharing discussion board document sharing email file servers instant messaging live presentation recording remote blackboard RSS screen sharing version control systems remote PC access VoIP VPN
Coordination	Regulating elements and players for harmonious action	Amazon.com classroom management concurrency control decision support eBay interactive voice recognition Internet protocols network meetings operating system project management SOA support center telescience (remote lab) workflow management
Cooperation	Playing together in the same game under agreed “rules of interaction” (including games of competition)	collaboratory creation nets discussion forum ESP.com multiplayer games newsgroup Second Life wiki (Wikipedia)
Collaboration	Creating solutions or strategies through the synergistic interactions of a group of people	Appreciative Inquiry Brainstorming Consensus workshop Straus Method

Given that almost every technology shown as an example in Table 1 has been called a collaboration tool, it is apparent that most "collaboration tools" do not guarantee that their users will collaborate on anything. Only a few tools actually qualify as collaboration technologies. The four collaboration tools listed are processes that at best are partially automated.

If we are to achieve the extent of collaboration we keep calling for, and support collaboration with automated tools, we require a deeper understanding of how collaboration works.

Collaboration is Not Our First Choice

When faced with a messy problem, people do not automatically fall into a mode of collaboration. Our colleague, Nancy Roberts, has confirmed this from her work and uses it to teach a class on "coping with wicked problems" [8].

Roberts begins the class by posing a wicked problem and asking everyone to come up with a solution to it. The students come together and share their proposed solutions. The group judges no solution satisfactory. Their proposals typically involve getting an appropriately high authority to make and enforce key declarations. For example, a green infrastructure is best achieved by establishing a new cabinet-level "infrastructure czar", who can set sustainability goals, create timetables for their completion, and inflict punishments on those who do not comply.

After this failure, Roberts asks the students to try again. Once again, when they come together, the group judges no proposed solution satisfactory. This time their proposals involve various forms of competition: the best prevails in some sort of contest. For example, the green and blue advocates both present their cases to the public, who vote on referenda to adopt one scheme after a period of debates and campaigning.

Roberts sends the students back to try a third time. In their frustration over their recalcitrant instructor they start meeting as a group. They discover they can invent solutions that take care of multiple concerns. They find a solution to the wicked problem.

Roberts notes that they eventually got to collaboration, but not before they had exhausted the alternatives of authoritarianism and competition. These two approaches do not work because they do not show each member of the group how individual concerns will be taken care of. Roberts concludes, "People fail into collaboration."

The situation in the US after Hurricane Katrina in August 2005 followed this pattern but never made it to collaboration. The wicked problem was to restore civil society in a region where the storm had knocked out all infrastructure and most of the residents had permanently fled. The widely accepted initial solution approach was authoritarian: FEMA would come in, orchestrate everything, and get everyone back on their feet within a year. When it soon became apparent

that this would not work at all, the situation devolved into numerous competitions (including disputes and finger-pointing) between federal and local jurisdictions. Two years after the disaster, the region remained gridlocked by local rivalries, fewer than half the residents had returned, disaster reimbursements were held up by enormous tangles of red tape, and very little rebuilding had even started. Not only did they fail at authoritarianism and competition, they failed to fail into collaboration.

Two aspects of our contemporary culture may be further disincentives for collaboration. One is a belief that we can win in every negotiation by standing our ground [4]. This belief leaves no room for a "we". The other is a belief in "hero celebration": we look for a hero in every successful group and give the credit to the hero alone. Who will collaborate if they think "we" will be stolen?

Achieving a state of collaboration is not even a foregone conclusion, even if we somehow allow for the other two approaches to be tried and fail first.

Therefore it will take some work on practice on our part to understand how collaboration works and how to achieve it.

Structure of Collaboration

In our work facilitating collaboration, we have found that collaboration develops in the group by a five-stage process. A process facilitator leads the relevant stakeholders through them:

Declare
Connect
Listen and learn all perspectives
Allow a "we" to develop
Create together

Throughout, it is helpful to record new points learned, proposed, or created on displays for all to see. This form of group memory helps everyone recall ideas belonging to the group as a whole [9]. Here is a summary of the stages.

1. Declare: The group's leader or organizer declares a question for the group to consider. The question emphasizes new possibilities rather than current deficits. Each group member declares acceptance of the need or desire to work together on the issue, and openness to the perspectives of the others.
2. Connect: The members take time to become present and engaged with each other. They say what concerns bring them to the gathering. They say their aspirations and what is at stake for each of them. They say why they see a need for collaboration. They look for and acknowledge connections such as mutual friends, business interests, or education.
3. Listen and learn all perspectives: Now the group speaks and listens, as openly as possible, to the motivating concerns of each member on the issue. The goal is to expose all the concerns and learn how and why each matters to some member. Members tell stories showing how concerns affect their worlds. For example, "Low wattage light bulbs matter to me. My company replaced a thousand incandescent bulbs and saved $5000 on our electric bill

in the first year. That's a lot of cash for our little company." The listening must be *open and inclusive* – seeking to gather many different perspectives, and avoid any initial judgment that one is better than another. Conversation is for clarification -- not justification or argument. A response, "Now that's interesting! How did you come to see it that way?" fits, but not "I see a flaw in your argument." This stage is complete when everyone appreciates that the group has multiple concerns to consider in any solution of the issue.

4. Allow a "we" to develop: The group continues the conversation about what matters for as long as necessary until they develop the *experience* of "we". The first signs of a group identity and solidarity are members recognizing, respecting, and even owning the interests and concerns of the other members. At this stage members begin making tentative proposals that address multiple concerns. The facilitator keeps the proposals tentative and the mood exploratory. The conversation will evolve into a shared feeling that we are all in the same mess together, and by staying together we can resolve the mess. The mess may start to unravel as the members become aware of and take care of their interlocking concerns. Occasionally, the mess will evaporate in the light of the new perspective of "we".
5. Create together: Now the group engages with the actual work of creating projects. Some will be variations of the tentative earlier proposals, others new. To win group support, projects must address multiple concerns. Members offer to lead projects; other interested parties join the project teams. The facilitator guides members with concerns about a proposed project to question in a "we" mood of exploration, clarifying objectives and exploring consequences. For example, instead of saying, "This project will be too expensive," the member could ask, "How will we get the resources to do this? In my experience they will be considerable. Can we reformulate in a less expensive way?" As proposals are discussed and modified in this way, the group will identify the highest priorities and gravitate toward a small number of possibilities. These can then be tuned for more effective action. The group's final agreement on projects to take forward cements its solidarity and service to a larger cause.

The mood of the process is critical: it should be open and appreciative throughout. Openness encourages everyone to contribute ideas and disclose concerns. Appreciativeness invites creativity. The contrasting mood of problem-fixing tends to be narrow; it focuses on what's wrong rather than what could be; it discourages group solidarity. We are more likely to get collaboration and a solution by starting with a positive question and approaching it in an open, appreciative mood [1].

Consider a scenario of a group of green and blue infrastructure advocates deciding to collaborate together despite the clash between their perspectives. They discover that some of their members are motivated green because beloved family members succumbed to lung diseases. They discover that others are motivated toward security because their businesses have been robbed at gunpoint and because one of their companies went out of business in a blackout. They discover that all of them are deathly afraid of backing a centralized government solution because of the government's poor track record; they do not

want to risk locking in a bad solution. They start speculating about grass-roots solutions that make it cool and fashionable to be both green and secure. They agree on committees and working groups that will sponsor contests for well designed energy efficient products and stimulate research into personal home power plants that don't depend on the grid being operational all the time.

Limitations of This Structure

This framework is at the heart of Appreciative Inquiry [1] and the Straus Method [9], processes with enviable records of success at community formation for coping with difficult problems. These processes bring together representatives of all the views and perspectives about the problem in a facilitated workshop, where they run through the stages listed above. The facilitators maintain a mood of open, appreciative exploration throughout and maintain a group memory with displays visible to everyone. In the final stage (action plan) people make offers for projects and post summaries on the walls. They often use a consensus voting process to cull the projects down to a half dozen or so. Members sign up with teams to work on those projects. The workshop organizer often reserves some funds to help the teams (e.g., travel funds). Because the workshop produces actions by teams that are endorsed by all the community representatives, it is much easier for the community as a whole to accept and support the teams. The process often leads to a good solution of the original problem.

These two processes illustrate why collaboration process can be supported by technology but never be fully automated. Much of the process depends on facilitators keeping the group in the right mood and staying with each stage until its objectives are met. Humans are good at such tasks, but not machines.

How far does the collaboration process scale? We know that it works for workshop size groups (say 50-200 people). It extends to larger communities if the workshop represents them well and if the sponsors can support the project teams created by the collaborating group. But about wicked problems that affect millions of people? How do we bring about enough collaboration to influence so many?

This of course is the central question in efforts to deal with large-scale wicked problems such as sustainable infrastructure. We don't yet know how to make the collaboration process scale up to enlist millions of people in a solution. We do know it is possible because numerous wicked problems have been resolved by savvy leaders combining technology with political and media operations. Prominent examples include Mothers Against Drunk Driving (MADD) and Al Gore's campaign "An Inconvenient Truth." The first step is always as simple as a willingness to declare that we are stuck and that we must somehow collaborate to find a solution.

Conclusion

Collaboration occurs when a community creates a solution to a difficult problem that takes care of all their concerns at the same time. Collaboration is an ideal achieved far less often than it is invoked. It is often confused with information

sharing, cooperation, or coordination. Most of our "collaboration technologies" are actually tools for information sharing. We have a few tools for cooperation and coordination, and very few for collaboration.

A successful collaboration depends on the participants being willing to share divergent perspectives and concerns with each other, ultimately looking for a solution that addresses all their concerns. The collaboration process must move through all five stages. A masterful facilitator or leader can accelerate it. When it succeeds, the members experience solidarity and new energy: a "We".

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