



Co-creation

Wisdom from wherever

The Wisdom of Crowds

by James Surowieki

Many years ago, I co-directed a career college that trained workers for the health sector. As part of that, we developed a training program for community mental health workers – an exciting challenge because mental health involves the intersection of several disciplines including psychopharmacology, counselling, occupational therapy, community development and social work. I assembled a team of curriculum designers, one for each of the relevant disciplines, to develop the course and ultimately to deliver it.

Each of the designers worked independently for awhile developing their own pieces until we were ready to put it all together into a day-by-day curriculum plan spanning eighteen weeks. I knew that a conventional meeting that walked through the program week by week – or worse, day by day – would take an eternity. So instead, I put eighteen flipcharts on the wall, and each developer was given “chits” corresponding to pieces of their material. My only instruction to the team: “Go put up your chits in the time slots that make the most sense.” Eighteen weeks, six individuals, and over two hundred chits. We allocated an hour and a half for the work, but we were done in less than an hour.

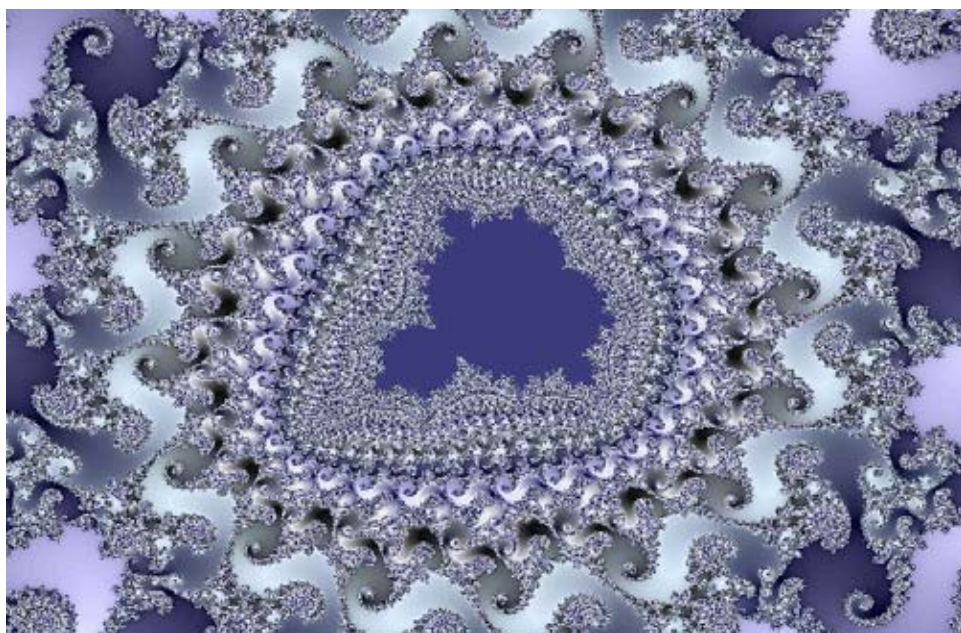
In that hour, the room had the look and feel of a stock exchange:

Crystal in Metallic Motif

How does change happen? In a fractal, if any part is changed, the entirety is changed because both part and whole are based on the same pattern. Likewise, in an organization or community, it is possible for a small group to shift the larger group.

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chaotic, concurrent, conversations and negotiations where pairs and trios of people gathered around key questions and then reconfigured. There was a palpable enthusiasm for the common objective, namely: to have the program unfold in an integrated and incremental fashion. The resulting design was very good, and the delivery followed the plan with only minor adjustments.

What did this experience teach me? That groups can be very smart – as long as the structure and process support their intelligence.

What makes a group smart?

That is the subject of James Surowieki's *The Wisdom of Crowds*. Contrary to what most of us think, crowds can be very intelligent, often matching or bettering the performance of recognized experts. This can be hard to swallow, particularly if you make your living by being an expert. But let me share a couple of Surowieki's examples:

- ▶ Around the turn of the 20th century, scientist Francis Galton documented a contest at a livestock exhibition: guessing the weight of a live ox after it had been slaughtered and dressed. Any passer-by could make a six-pence wager, some of whom had considerable expertise – farmers and butchers – and some of whom didn't. Eight hundred people made the small wager and a guess. What was the result? After the ox had been slaughtered and dressed, the weight was 1,198 pounds. The average guess (of experts and nonexperts) was 1,197 pounds – essentially a perfect prediction.

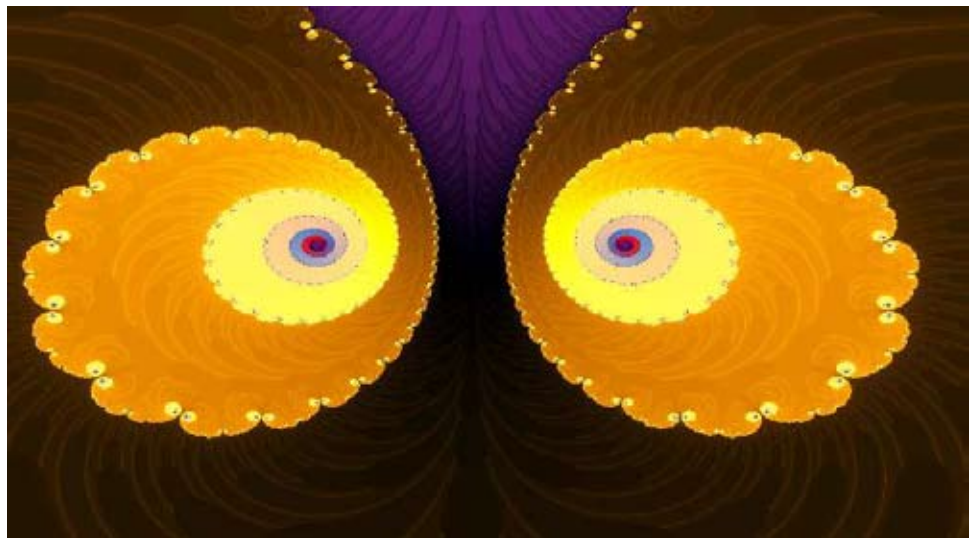


Face to Face

Fractals are examples of chaotic systems – which, technically speaking, are neither random, disorderly, nor lacking in pattern. One characteristic of a chaotic system is high sensitivity to initial conditions. Roulette is chaotic because an infinitesimal change hugely affects the outcome. A baseball bouncing is less chaotic because small changes tend not to drastically change the outcome.

Face to Face II

Fractals may accurately describe the behaviour of our communities and organizations, or they may simply be a useful metaphor to contemplate. For example, it is helpful to distinguish between those actions and assumptions that are “close enough” (not like fractals) and those that may have profound effects in the long run (fractal-like).



- ▶ Within minutes of the space shuttle Challenger disaster, the stock prices for four of the major suppliers to NASA – Lockheed, Martin Marietta, Rockwell International and Morton Thiokol – were all down, but Morton Thiokol was down so far so fast that a halt was called to the trading of its shares. When trading resumed, the price was down 12 percent, about double that of the other three. There was not yet a glimmer of understanding about what caused the disaster. Even the next morning there was nothing pointing to the company as the cause (while Morton Thiokol stock continued to slide and the others rebounded somewhat). Six months after the explosion, scientific analysis finally pointed to the company’s faulty O-rings as the explosion’s cause. In short, the market seemed to “know” almost immediately which company was at fault. Insider trading was investigated and ruled out. So it could be luck – or something else.

Surowieki gives example after example of groups outperforming the vast majority of the individuals in that group. My first reaction to this was, “So what? Just zero in on those one or two experts for matters of importance.” But Surowieki points out that in real situations, we don’t have the advantage of hindsight, i.e. there is no way of knowing who the crowd-beating experts might be. In fact, this year’s crowd-beating expert is likely to be next year’s loser. Just look at mutual-fund managers.

Three Qualities of High-functioning Groups

Many of us know all too well how groups can underperform just about everyone in the group. Meetings that stall. Markets that bubble.



Organizations that can't seem to coalesce around a compelling vision. In those situations, we find ourselves wanting someone, almost anyone, to step forward and make a few sane decisions.

So what differentiates smart groups from stuck ones? Surowieki points to three factors: diversity, independence and decentralization.

Diversity. Groups do better who have a diverse set of thinking styles and have access to diverse information sources about the challenge being met. Sometimes, diversity can be achieved by sheer numbers – for example the market that evaluated the Challenger disaster – and sometimes diversity can be achieved deliberately. For example, some organizations as part of the hiring process test for thinking styles using the Myer-Briggs Type Inventory (MBTI) or a similar instrument. Some simply look for cultural and ethnic diversity. It is also possible to introduce diversity into a team by sending individuals on learning journeys – a day or more spent in a different part of the system than they are used to. For instance, in a health organization, an x-ray technician can sit in the waiting room of an out-patient clinic. The triage nurse in the outpatient clinic might go to Accounting. An anesthetist might visit a physiotherapist. And for diversity to work, for it to capitalize on the wealth of information available, there needs to be lots of listening.

Independence. It is critical that everyone in the group can exercise their own judgment without being unduly influenced by the group. So it is paradoxical that, to achieve independence, it is important for decision makers to pay more attention to their own data and insight, and pay *less* attention to the opinions of others. Sometimes the listening and not-listening can be done in phases – when you are in learning mode, you listen deeply to others. When you're contributing to a decision, then you need to step back from the winds of opinion and re-assess your data and your intuition.

One practical way to encourage independence is to make decisions concurrently. Decisions made over longer periods of time, with ample opportunities for influence, are more vulnerable to group think. Surowieki calls this “an information cascade.” In contrast, the World Café, a methodology I use for various applications, involves many concurrent small conversations, and this encourages significant independence.

A factor related to independence is creating a culture that encourages wrong guesses. If everyone in a group feels free to make a wrong guess, the performance of the group improves markedly. If, on the other hand, everyone in a group is assessed for their own performance,

risk taking, independence and group performance all go down.

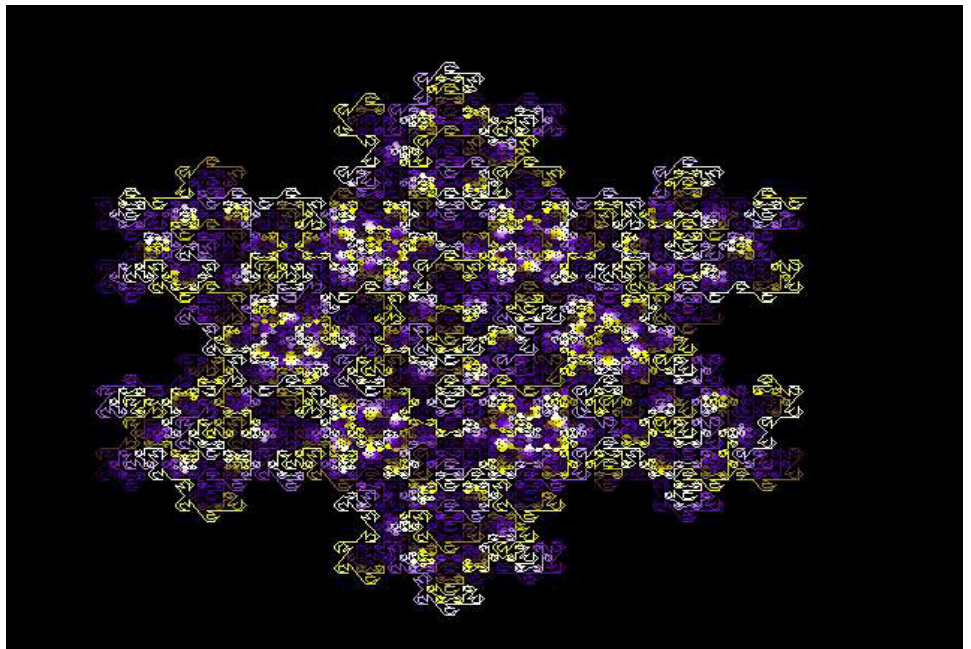
Decentralization. One way to build both diversity and independence is decentralization. In some ways, this happens naturally in organizations in the service of specialization and division of labour. Each person develops specialized and often tacit knowledge of one aspect of the organization's overall mission. The trick is to find ways to share information that is collectively useful – to aggregate it in some way. Otherwise, we see silos – independent units that cannot cooperate or share information and see no reason to do so.

A dramatic case in point for dysfunctional decentralization – i.e. no effective aggregation of insight – is the U.S. intelligence community. All the pieces were there to predict the 9/11 attack, but many factors stymied the aggregation. A simple way to deal with the problems of disaggregation is to put everyone in the same room and ask questions they all care about. Whenever I do this in my work, people overwhelmingly appreciate the opportunity to connect with others and learn from them.

Group Think, Blind Spots and Bubbles

At a time when we have been witness to the popping of the largest financial bubble in almost a century, it may seem insane to be advocating the wisdom of crowds and, by implication, of markets. What makes a crowd, an organization or a market go off the rails?

Snowflake





What causes a riot, an Enron or a global credit crisis? What happened to the potential for wise decisions and collectively accurate perception?

According to Surowieki, it is that these situations had lost all three factors of a wise group; i.e. they became homogeneous, dependent and centralized.

Here are some short suggestions for addressing these three poisons to group performance. If you sense that your team, organization or community is homogeneous, encourage connections with “foreign” individuals, sources of information, or environments. If you sense your team has become dependent on each other, create situations where guesswork, brainstorming and idea generation is encouraged and respected. If you are centralized (or siloed), create situations where many voices are heard at once and where information is shared without monitoring, interpretation or embellishment by a central authority.

The Special Challenges of Small Groups

Small groups are qualitatively different from crowds, says Surowieki. Influence is more immediate, and the potential power of that influence is far greater. The danger of a dominating individual holding sway is greater. Polarization is more accentuated. Therefore, within a small group, the importance of diversity and independence, in particular, are accentuated.

Things that bolster small group performance include:

Ensure that everyone participates. This is a corollary of diversity. More and more groups are comfortable with some form of talking circle, and the simplest way to do this is to have a check-in question and a check-out question. For example, “What do you hope to accomplish in this meeting?” and “What do you take away from this meeting – a commitment, a learning, or an inspiration?” *Question for reflection:* What could I do to promote greater participation in our group?

Ask questions that provoke people out of habitual discourse. Discussions centered on what everybody already knows are not helpful. Acknowledge and appreciate those who ask the tough, weird or seemingly foolish questions. *Question for reflection:* What is the one wicked question that, if asked, might shift our discourse to a new level?

Operate on the assumption that the group is better than the sum of its parts. In other words, assume that the group can and will generate new insight and value. Often connecting a group to its purpose, values and dreams

Reading Surowieki and contemplating fractals raises a question. As something that is done over and over, feeding information forward, the agents in a fractal are anything but independent. So when would you want something to operate fractally, and when not?

will galvanize a group in a new way. *Question for reflection:* What is my larger aspiration for this group and our work?

Persistently inject new, relevant knowledge. This can be done through learning journeys, specialist reports, or reading from a related discipline or field. *Question for reflection:* How does your group currently learn, and what else is possible?

In Search of Wise Groups

For many kinds of challenges – and especially ones that involve coordination, cooperation, or penetrating uncertainty – groups can perform brilliantly. And the difference between brilliance and idiocy often comes down to a few people. As Margaret Mead said:

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.

Fractal Foliage

If fractals have somehow informed your work in organizations or communities, please let me know (bob@robertwiegler.com), and I will share your experiences in the next issue of Co-creation.

