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# HOW TO MEASURE THE WISDOM OF A CROWD

A group's interactions drive its intelligence more than the brain power of individual members.



By **Jessica Marshall**  
Thu Sep 30, 2010 02:01 PM ET  
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### THE GIST

- The intelligence of teams can be measured using similar methods to testing individuals' intelligence.
- The intelligence of the group's individual members does not matter much in predicting the intelligence of a group.
- Groups where members participated more equally and had more social sensitivity were more intelligent.

The "intelligence" of a group can be measured, according to a new study, and it has little to do with the brain power of its individual members.

What makes a team more intelligent has more to do with the group's interactions. More equal participation and greater social sensitivity on the part of its members are the key factors in predicting a group's intelligence, according to the study, published online today by the journal *Science*.

The findings could eventually be useful in screening teams before choosing one to charge with an important task, the authors propose, or in testing strategies for improving groups' performance.

"It really calls into question our notion of what intelligence is," said study lead author Anita Williams Woolley of Carnegie Mellon University in Pittsburgh, Penn. "It's been thought about as something that resides in one person."

But understanding what makes groups perform better is critical in today's world, she argued. "More and more, people need to collaborate to solve problems," she said. "For a lot of the tasks groups are working on, there are things that people can't do on their own."

While somewhat controversial, previous research has shown that individuals' intelligence can be measured. People who do well on one type of mental task generally do well on others, so administering a battery of tests allows researchers to evaluate a person's overall intelligence.

The new work applied the same principle to groups. The researchers gave randomly assigned groups of different sizes a variety of tests, including visual puzzles, negotiations, moral judgments and brainstorming exercises. Then, the groups performed a larger task, either playing checkers against a computer or designing and building a structure.

The team found that a given group's performance on the tasks was correlated - that teams that did well on one test tended to do well on others and vice

While the finding that having more women on teams makes teams smarter is provocative, the researchers determined that this effect could be explained by the fact that women generally score higher on social sensitivity. [Click to enlarge this image.](#)

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### VIDEOS

versa. By calculating an intelligence score for performance on the first group of tasks, the researchers could predict how well a team would do on the ultimate test: the checkers game or the design assignment.

But the team's scores had little to do with the intelligence scores of individual members, or with the score of the "smartest" person on the team, the researchers reported.

Instead, three more social factors were correlated with group intelligence: how good the group was at distributing turn-taking, how socially sensitive the group members were, and how many woman were on each team.

While the finding that having more women on teams makes teams smarter is provocative, the researchers determined that this effect could be explained by the fact that women generally score higher on social sensitivity. If social sensitivity can be taught, the gender gap could be narrowed, Woolley noted.

Social sensitivity tests the ability of a person to read the facial expressions of others and infer what they're thinking and feeling, she explained.

"It's a lovely demonstration that teamwork matters and has a life of its own," Amy Edmondson of Harvard Business School in Cambridge, Mass., said of the study. "To me, it's useful if it gives managers greater confidence that the whole really is greater than the sum of its parts, and therefore the effectiveness lies in the interaction of the parts, not in the parts themselves."

More work will be needed before organizations can put the findings to use testing or designing their teams.

"The direction we need to go is getting these tests down from five hours in a lab to something quicker, but still valid." Woolley said. "And relating it to what they're doing, whether it's managing a company, tanks in a field, or whatever the case is."

In addition, Woolley plans to do similar experiments where teams have access to the Internet or other types of technology to see how that affects groups' performances.

"We also have to do some research to understand how a short-term group test would predict group performance on long-term tasks," said Edmondson, who was not a part of the study. "Much of the kinds of work that people do in the workplace happens over weeks and months."

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 **Lyn Brewer**  
 I thought all these years the 'intelligence of a crowd' was being determined by our teachers who teamed students to find answers. I had ideas of my own, but it helped me be more objective in life just by listening, and watching body language.  
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 **kare anderson**  
 "equal participation and greater social sensitivity" are only part of the story. Other research shows that the wisdom of the crowd pays off for simple tasks when the crowd is diverse, much less so for complex tasks and/or when the crowd is similar in talents, experience etc.  
 See book, Group Genius, among others.  
 The forms of collaboration that seems to be growing most swiftly because of their leveraging value of the right "crowd" and the leveraging mechanism/"rules" are crowdsourcing (See, for example Cisco's i-prize approach involving spigit) and the self-organized project teams SOPTs.  
 There is a danger, as the earlier commenter pointed out, of groupthink, or worse, when people of similar beliefs become increasingly close-knit i a group. Read more in The Big Sort and in Going to Extremes.  
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 **Dixon Steele 1 on 1**  
 "Group Think" and "Mob Rule" can be either good or bad.  
 Good if it's democratic; bad if it's extremeism!  
 Don't recall who said it, so I'll paraphrase here:  
 "Just because the people believe a lie, no matter how convincing the case for it is, it's still a lie!"  
 Fill in the blank \_\_\_\_\_ for that, eh?  
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