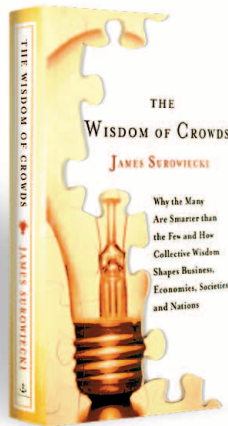




Executive Book Summaries®

FILE: LEADERSHIP



By James Surowiecki

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Why the Many are Smarter Than the Few and How Collective Wisdom Shapes Business, Economies, Societies and Nations

THE WISDOM OF CROWDS

THE SUMMARY IN BRIEF

Western society is focused on the power of the individual mind, but under the right circumstances, groups can actually make better decisions than even the smartest person within them. When individuals in a crowd are appropriately diverse, independent and decentralized, their aggregated decisions are surprisingly on point. With this knowledge, the power of groups can be used to find unknown answers and determine how to coordinate behavior and cooperate in all areas of society. Our everyday activities, our government and our economy are all affected by the power of crowds, and when things go awry, it is often because one of the key elements of an intelligent crowd is missing or underexpressed.

In The Wisdom of Crowds, journalist James Surowiecki explores the underlying implications of the idea that large groups of people are smarter than an elite few, no matter how brilliant.

What You'll Learn In This Summary

- ✓ How a properly structured group can answer problems of cognition and come up with the best or right answer.
- ✓ How members of crowds — shoppers, subway riders — coordinate their behavior with each other, knowing everyone else is doing the same thing.
- ✓ How self-interested people cooperate when logic dictates there is no reason to do so.
- ✓ How small groups are not as effective at decision making as crowds, even when the small group is made up of experts.
- ✓ How corporations can truly live up to the promise of decentralization.
- ✓ How imperfect, irrational players in a market can still allocate resources efficiently.
- ✓ How an uninformed electorate can still manage to elect the people who will make decisions in favor of the public good.

THE WISDOM OF CROWDS

by James Surowiecki

— THE COMPLETE SUMMARY

PART ONE: COLLECTIVE INTELLIGENCE

Tapping Into Crowds

In 1906, British scientist Francis Galton watched a weight-judging competition at a livestock fair. People bet on the weight of an ox after it was slaughtered and dressed. Butchers, farmers and nonexperts all bought tickets and guessed.

Galton borrowed the tickets after the competition and calculated the mean of the 787 guesses — the collective wisdom of the group. The crowd guessed 1,197 pounds. After the ox was slaughtered and dressed, it weighed 1,198 pounds. Galton had discovered that, under the right circumstances, groups are remarkably intelligent and often smarter than the smartest people in them, especially if individual guesses are aggregated and averaged. The group is not better than every single person, and some individuals will be smarter the more incentive they receive, such as in the stock market. But it is rare that the same person will be right as consistently as the group.

Game Show Contestants

On the TV show *Who Wants to be a Millionaire*, contestants answered a series of four-answer multiple choice questions. When stumped they could have two choices of answers removed, call a smart friend or poll the audience. The smart people were right 65 percent of the time, but the studio audience was right 91 percent of the time.

Cognition problems can also have answers that are unknown or in the future. For example:

Within 21 minutes of the 1986 *Challenger* explosion, the stock price of Morton Thiokol had fallen well below that of the other three companies involved in building the shuttle. Six months later, the cause of the explosion was determined to be the O-ring seals on the booster rockets made by Thiokol.

Google lets all of the pages on the Web vote on which pages are most relevant to your search.

The Iowa Electronic Markets (IEM), made up of about 800 people buying and selling futures on different election outcomes, is often more accurate than national polls.

Futures markets like the IEM exist for Hollywood box office receipts, news and sports. They work because they have the fundamental characteristics — diversity, independence and decentralization — that are key to making good predictions. ■

The Difference Difference Makes

Ransom E. Olds started selling cars in 1899 and prospered by selling the curved-dash Olds: a car for the middle class. With amazing marketing, he did quite well and sold more cars than any other U.S. manufacturer in 1903. Olds had fierce competition from hundreds of automobile companies. There was no standard, so they were peddling a huge array of vehicles with different sizes, shapes and power generators. Toward the end of the decade, most contenders began to fade, but innovators like Cadillac and Ford stayed. By World War I, Olds had been bought by General Motors.

The histories of most new industries are similar — a profusion of alternatives in the early days and a winnowing out of the winners who effectively choose the prevailing technologies. It seems inefficient, but the **diversity of ideas** allows meaningful differences among early ideas, not just minor variations on the same concept. The system works when it can recognize losers and kill them off quickly.

It is not enough to generate a diverse set of possible solutions.
(continued on page 3)

The author: James Surowiecki is a staff writer at *The New Yorker*, where he writes the popular business column, “The Financial Page.” His work has appeared in the *New York Times*, the *Wall Street Journal*, *Wired* and *Slate*.

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Published by Soundview Executive Book Summaries (ISSN 0747-2196), P.O. Box 1053, Concordville, PA 19331 USA, a division of Concentrated Knowledge Corporation. Published monthly. Subscriptions: \$195 per year in the United States, Canada and Mexico, and \$275 to all other countries. Periodicals postage paid at Concordville, PA and additional offices.

Postmaster: Send address changes to Soundview, P.O. Box 1053, Concordville, PA 19331. Copyright © 2005 by Soundview Executive Book Summaries.

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The Bay of Pigs

The Kennedy administration planned and carried out its Cuban invasion strategy without ever really talking to anyone who was skeptical of the prospects of success. The people who planned the operation were the same ones who judged its likelihood of success. The few who voiced caution were silenced, and no one consulted the CIA or the Cuban desk of the State Department.

The group ended up neglecting some elemental facts, including the popularity of Fidel Castro, the strength of the Cuban army, and even the size of the island. They even convinced themselves that the world would believe that the United States had nothing to do with the invasion.

The Difference Difference Makes

(continued from page 2)

tions. The crowd also needs to be able to distinguish the good from the bad. Diversity adds perspectives that would otherwise be absent and makes a group better at solving problems. In fact, grouping only smart people together might not be that good an idea because they tend to resemble each other in skills. Adding people who know less but have different skills improves the group's performance. A group with diverse knowledge and skills will almost always make a better decision than one or two experts.

Homogenous groups, particularly small ones, are often victims of "groupthink." They become more cohesive, dependent on each other and isolated from outside opinions. They become more convinced that the group opinion must be right and will rationalize away possible counterarguments and believe that dissent is not useful and improbable. ■

For additional information on the knowledge of experts, go to: <http://my.summary.com>

Imitation, Information Cascades and Independence

Another key quality for good decisions is **independent thought** — not isolation, but relative freedom from the influence of others. It keeps the mistakes that people make from being correlated, and it increases the odds that the group will have new information rather than the same old data. Even if a person is biased and irrational, if he or she is independent, the person won't make the group dumber.

Independence is difficult to maintain when learning is a social process. The more personal contact people have with each other, the less likely it is that a group's decisions will be wise. Here are several ways that groups can

sabotage themselves:

Social Proof — People tend to assume that if many people are doing something, there must be a reason why. It is why the crowd becomes more influential as it grows.

Herding — People stick with the crowd because it is less risky than doing something radical that could fail enormously.

Information Cascades — People with different information, much of it imperfect, make decisions in sequence because they believe they're learning something from the example of others. Once people stop relying on their own knowledge, the cascade is no longer informative. They are making decisions on what they think people who came before them knew, instead of on their own knowledge.

Complicated Calculations

Despite these pitfalls, imitating others instead of undertaking complicated calculations before every action is a rational response to our own limits. Used well, it is a powerful tool for spreading good ideas fast. But people have to be willing to stop imitating and learn for themselves when the benefits become high enough. Intelligent imitation depends on an initially wide array of options and information and the willingness of at least some people to put their own judgment ahead of the group's. ■

Plank-Road Fever

The Erie Canal, completed in 1825, was a boon for commerce between large towns, but it didn't help people in smaller towns. George Geddes had seen the success of new plank roads in Canada — wooden planks laid over two lines of timber — and he thought it would be a solution. It was clearly a good innovation, but it wasn't clear that it would be cost-effective as a privately owned, toll-funded enterprise. Geddes believed a typical road would last eight years, providing a good ROI.

Geddes convinced Salina, New York, to build a plank road in 1846, and plank roads spread across the state and through the Midwest. Within a decade there were 352 plank-road companies in New York and more than 1,000 in the United States.

Unfortunately, plank roads only lasted four years, not eight. By the late 1850s, it was clear that they were ineffective. By the end of the Civil War, almost all were abandoned.

When the plank roads in the first years were successful, people saw a ready-made solution. As more were built, their legitimacy became entrenched, and the desire to consider other solutions shrank. By relying on dependent information, it took years before people realized the fundamental weakness of the roads, and it was more rational to rely on their own knowledge.

Putting the Pieces Together

The U.S. intelligence community is a collection of virtually autonomous, decentralized groups — ideal conditions for a group to make good decisions. Sept. 11, 2001, revealed the flaws. Given the sheer volume of information that intelligence agencies process, it is not surprising that a retrospective look at the data did not cry out any warning, but the fact remains that the intelligence community did not anticipate any of the terror attacks from 1993 to 2001. Congress found that decentralization without aggregation and a lack of information sharing were parts of the problem.

Decentralization has been very popular in business over the past 15 years. There is also a renewed emphasis on social networks, such as Napster, that allow people to connect and coordinate. In order to make good decisions, crowds need **decentralization**. This means their power does not fully reside in one central location, and important decisions are made by individuals based on their own knowledge. Specialization increases the scope and diversity of opinions and information that can be used to solve difficult problems. The weakness of decentralization is that there is no guarantee that the information will get to the rest of the system. The information must be **aggregated**.

Galton counted the ox-weighing votes to aggregate them, and in a free market, the aggregating mechanism is usually the price. Without aggregation, the best solution a group can come up with is that of the smartest person, and there is no guarantee that solution will emerge.

FutureMAP

FutureMAP was a market for people to buy and sell contracts based on expectations of events in the Middle East and elsewhere. It was a way for the government to aggregate information from many sources. An internal market, limited to between 20 and 30 people, could help circumvent internal politics by putting a premium on accurate forecasts, not keeping the boss happy. The Policy Analysis Market (PAM) would be a similar market open to the public.

The possibility of people profiting from terrible events caused a firestorm. Intended to collect information from people from whom the American intelligence community might not normally hear, it was considered “offensive” and “morally wrong” by Senators Ron Wyden and Byron Dorgan who led the campaign to quash it.

Their concerns were misplaced since U.S. government analysts get paid to try to answer the same questions as PAM every day. PAM was not a macabre game, but a tool to achieve a better sense of the economic health, civil stability and military readiness of Middle Eastern nations.

The U.S. intelligence community was practicing the wrong kind of decentralization. It did have diverse and decentralized sources of information, but it did not aggregate the information or its judgments. Linking computer databases and setting up decision markets are both ways for the agencies in the U.S. intelligence community to aggregate more effectively. ■

Coordination in a Complex World

Some problems have a right answer — the weight of the ox — or a definitive answer — anticipating terror attacks. Coordination problems occur when a person has to determine the right answer for him- or herself, but also what other people think the right answer is. These problems are less amenable to clear, definitive solutions.

The sociologist William H. Whyte spent a great deal of time studying the streets and sidewalks of New York City to see how so many people could coordinate themselves so well. Despite their small space, they don't bump into each other. Without anyone telling them what to do they constantly anticipate each other's behavior, slowing and speeding slightly to avoid collision.

Social scientist Thomas C. Schelling, set up experiments in which pairs of subjects chose “heads” or “tails,” with the goal of matching their partners. Thirty-six of 42 people said “heads.” When asked to name a positive number, 40 percent of the subjects chose “one.” Schelling believes there are salient **focal points** in a society where people's expectations converge. They allow people to find their way to collectively beneficial results without centralized direction.

Established Norms and Conventions

Coordination also occurs through established norms and conventions. They maintain order and stability and allow groups of disparate, unconnected people to deal with certain situations without wasting time thinking about them or experiencing disruption.

Conventions should be irrelevant to economic life, but companies have them too. They lay people off in a recession instead of cutting wages across the board. Movie theaters charge as much to see a popular film on opening night as a dog limping along after five weeks. Yet without anyone leading or directing them most companies work in the free market, coordinating and getting resources to the right place at the right time. Studies show that most markets will settle on the right price between buyers and sellers over time, when rational people have complete information. But even imperfect markets populated by imperfect people can produce near-ideal results. ■

For additional information on coordination, go to: <http://my.summary.com>

First Come, First Served

“First come, first served” is a practice so basic that we don’t even think of it as a convention. On a subway or in a movie theater we assume it is the best way to distribute seats, even though it doesn’t take into account how much a person wants to sit down, who the person wants to sit with, or the person’s age or health.

In the 1980s, social scientist Stanley Milgram had his graduate students ride the subway and simply ask people, in a courteous but direct manner, if they could have their seats. Remarkably, half of the people gave up their seats, even without a reason. The most difficult part was not convincing the people, but mustering the courage to ask them in the first place. The students felt “anxious, tense and embarrassed” when standing in front of a subject. Much of the time they couldn’t even bring themselves to ask. The norm of first come, first served seating was so ingrained that it required real labor to violate it.

Taxes, Tipping and Trust

Cooperation problems often look like coordination problems, but they require taking everyone else into account. Even though most individuals pursue their own self-interest, cooperation problems require a group to expand its definition of self-interest beyond maximizing short-term demands. They also require trust.

In 2003, Richard Grasso, CEO of the New York Stock Exchange, essentially got fired for making too much money — \$139.5 million in total. He had done a good job, but he had to step down in the face of deeply irrational public outrage. Economists assume that humans are basically self-interested and that they will make choices that benefit themselves no matter what others do. But, in fact, people want decisions to be fair and they expect a reasonable relationship between accomplishment and reward. Though members of the public did not have to foot the bill, they felt that Grasso’s compensation was grossly unfair.

The reaction to Grasso’s package and the players in the ultimatum game (see sidebar on right) were irra-

tional, but they show a willingness to punish bad behavior and transcend a narrow definition of self-interest to serve the common good.

Prosocial Behavior

This prosocial behavior makes societies and organizations work, since they cannot rely on laws and contracts alone. Cooperation usually makes everyone better off, even though it is rarely rational for the individual to cooperate. People don’t want to pay their taxes, but to keep them doing so, they must trust that most other people are doing so. People cooperate and do not take advantage of each other partially because they will have to repeatedly deal with each other. And yet we still tip waiters we will never see again. In order for cooperation to work, we must trust each other.

Unfortunately, the more people trust, the easier it is to exploit them, so most market societies develop mechanisms to limit corruption. In the end it is capitalism and market forces that have allowed trust between strangers, driven by the benefits of mutual exchange. Markets may foster greed and selfishness, but people still show an irrational but critical willingness to reciprocate with trust. ■

The Ultimatum Game

A well-known behavioral economics experiment gives a pair of people \$10 to divide between themselves. The proposer decides how to split the money and then makes an offer to the responder. The responder can accept and they both keep the money or reject the offer and they both lose the money.

If the players were rational, the proposer would keep \$9, offer \$1, and the responder would take it, since rejecting it would leave him or her with nothing. In practice, proposals below \$2 are usually rejected. People would rather have nothing than let the other person walk away with too much.

The proposer anticipates this behavior, because he or she would do the same, and the most common offer in the game is \$5. No matter where in the developed world the game is played, people respond the same way, even when the amounts of money become quite significant.

PART TWO: EXAMPLES

Traffic: What We Have Here Is a Failure to Coordinate

In 2003, London started charging people to drive downtown during peak hours. Singapore has an electronic smart card in every car that pays a toll as soon as the car enters the central business district. Mexico City lets people drive on specific days based on their license plate numbers. The best solution to congestion would be responsive pricing so

that people paid to use a road based on precise conditions such as traffic, weather and their vehicle. Americans will accept congestion pricing with long distance telephone calls and midweek flights, but they abhor the idea of paying more to drive during rush hour. They would rather suffer in traffic than allow some people to pay to get out of traffic. But traffic is notoriously hard to coordinate.

Cars on a crowded highway are decentralized individ-

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Traffic: What We Have Here Is a Failure to Coordinate

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uals following simple rules: don't hit the car ahead, shift lanes when you can and drive as fast as you can safely. When there aren't too many, vehicles can move freely from lane to lane and speed up or slow down without causing trouble. When more cars enter the highway, others have to brake and a wave of braking ensues. As people try to change lanes to move faster, the lane speeds even out. Now, cars are in an unstable pattern traveling at similar speeds but more slowly than before. That creates a traffic jam that is hard to unstick. Cars leaving the front of the jam move more slowly than those entering the back. Jams also make drivers more cautious as they try to coordinate in complete uncertainty. They increase space between them, making lane changes more likely and slowing everyone down more.

Slowing Down and Speeding Up

Coordination on the highway is difficult because of the diversity of drivers. Diversity is good to decision making, but makes solving coordination problems harder. Experiments with computer-controlled cars moving in exactly the same way show that driver homogeneity is actually a solution to traffic jams. If cars could travel as a solid pack that would not constantly slow down and speed up, there would be almost no traffic jams. ■

Science: Collaboration, Competition and Reputation

Scientists routinely work in large groups, which allows them to incorporate many different kinds of knowledge. It makes it easier to work on interdisciplinary problems and guarantees a diversity of perspectives, making scientists more productive. The more productive and better known scientists are, the more frequently they work with others. Scientists also generally do not keep new knowledge to themselves, understanding that it does not get used up as it is consumed. They release discoveries so that others can use them to make their own hypotheses. Scientists depend on their predecessors and colleagues to do good work, so that they can build on it.

Scientists are self-interested, but they have discovered a way for their self-interest to benefit everyone. They pick what they find interesting and in the process of winning notoriety for themselves they make the group smarter. Like the SARS network, no one is in charge.

The challenge for the scientific community at the moment is that an increasing amount of scientific research is being funded by corporations, which have an economic interest in protecting information rather than

SARS Collaboration

In February 2003, the Chinese Ministry of Health notified the World Health Organization (WHO) of an entirely new disease. The WHO set in motion a global effort to uncover the source. On March 17, 11 research laboratories around the world began collaborating to find the source of what was known as SARS. The labs had daily teleconferences, debated results and posted photographs of viruses isolated from SARS victims. Different labs worked on the same samples, multiplying their speed and effectiveness.

By March 21, scientists at Hong Kong University had isolated a likely source. The same day, scientists at the Centers for Disease Control and Prevention (CDC) in the United States separately isolated a virus. Over the next week, other labs detected the same virus, and labs in Germany, the Netherlands and Hong Kong began sequencing it. By April 16, the labs were confident enough to announce that they had found the source of the disease. Though Cynthia Goldsmith at the CDC was the first person to spot the virus, it took weeks of collaboration by people all over the world to prove it was the right one.

disseminating it widely. Also, when famous scientists collaborate, they get a disproportionate share of the credit, because other scientists pay more attention to reputation than the work. These issues challenge the independence of the members of the group. ■

The Columbia Disaster and How Small Groups Can Be Made to Work

After the *Columbia* launched in January 2003, the people at NASA tried to determine how much damage had occurred when some foam broke off and hit the Orbiter during lift-off. The Mission Management Team (MMT) was briefed by Don McCormack who had talked to the Debris Assessment Team (DAT). The DAT did not have good enough photos to draw a conclusion, but it was very concerned. McCormack did not convey the concern in an MMT conference call, and Linda Ham, the MMT leader, indicated that since there wasn't anything the team could do, the problem wasn't important. Because Ham had already decided the foam strike was inconsequential, the MMT did not collect the information it needed to make a reasonable estimate of the damage, including photographs.

The MMT assumed from the outset that the question of whether foam could do serious damage was already answered. The team also assumed that photos were unnecessary because the resolution would not be good

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The Columbia Disaster and How Small Groups Can Be Made to Work

(continued from page 6)

enough to help. In fact, none of the managers had the security clearance to know how good the resolution would be. Ham asked questions framed to get the answers she already expected. “Can we say that for any ... foam lost no ‘safety of flight’ damage can occur to the Orbiter because of the density?”

Small groups emphasize consensus over dissent. The MMT meetings had a complete lack of debate and minority opinions. Meetings were too structured with Ham asking questions but making no effort to illicit comments from others. There was also little diversity of knowledge and experience, because everyone had been at NASA since grad school. Even one different opinion or skill set makes a group wiser.

Direct Influence

Members of a market or a betting pool get feedback in the form of a price or point spread, but in small groups people influence each other directly. This can make their judgments more volatile and extreme. Often, the person who talks more sets the agenda, even if he or she doesn’t know more. Groups are also vulnerable to polarization when people constantly compare themselves to everyone else and try to maintain their relative position. When a group moves in a more radical direction, people move with it to keep their relative position, thus moving the entire group further.

American life and business are rife with small groups, but few organizations know how to make them work. There is no point if they can’t aggregate diverse opinions and make decisions. The MMT never even voted on what to do. ■

The Company: Meet the New Boss, Same as the Old Boss?

Zara is a clothing retailer that has found a way to coordinate its interactions with fickle consumers by coordinating its resources. It has cut lead time to two weeks rather than the six to nine months typical in the industry. All store managers have hand-held devices linked to design rooms in Spain. They make daily reports on what is selling and what customers want. With their own 14, highly automated factories, Zara makes small runs and tests the products with consumers, coordinating with their demands. Zara doesn’t outsource, so it has complete flexibility. The company has managed to combine different traditional ways of coordinating business, which can be illustrated through these Hollywood gangster movies:

● *The Godfather, Part II* — A top-down hierarchy allows one person to make decisions and allows for

long-term investments. But the top becomes more and more isolated from front lines and information.

● *Heat* — A small, tight-knit gang has trust, specialization and can see the immediate and direct results of its own efforts. But it is limited by its resources, and a mistake or betrayal of trust hurts the whole gang.

● *Reservoir Dogs* — A temporary group of specialists comes together for one job and disperses. They can be handpicked for specialty, but it takes a lot of work to get them together.

The Cost of Coordination

Companies exist because they reduce the cost of coordinating large groups to accomplish goals. Through the 20th century, corporations were vertically integrated, hierarchical and centralized with little diversity among top executives. They paid lip service to collective decision making but ended up with too many layers of consensus, isolating top executives from real opinions even more. The system discouraged the free flow of information and skewed compensation against dissent and independent analysis.

In the ‘90s, the companies tried to involve employees more, but that remains an unusual outcome. Decentralization can work when people will be more engaged, when they control their own environment and it makes coordination easier. Instead of relying on orders and threats from above, companies can rely on workers to find new, more efficient ways of solving problems. Decisions that corporations have to make are complicated, but they should not be left in the hands of just one expert CEO. They should aggregate the wisdom of their employees. ■

Markets: Beauty Contests, Bowling Alleys and Stock Prices

Most investors do not like to short sell stocks because it is riskier, losses are potentially unlimited and they are surrounded by negative reinforcement as everyone else wants stock prices to rise. But the measure of the stock market’s success isn’t whether stocks are rising but whether its predictions are right. A group is more likely to be correct when there is a diversity of opinions, and short sellers can provide that diversity when they know about corporate malfeasance and corruption.

Market investors are not necessarily rational. This does not mean that the market is deeply flawed, but that when aggregated even investors’ irrational choices will result in a rational and smart collective outcome as long as deviances from “rationality” are random. Only behavioral quirks that create systematic biases in opinion — decreasing diversity and independence — damage the market.

Even so, markets are imperfect at tapping into the collec-

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Markets: Beauty Contests, Bowling Alleys and Stock Prices

(continued from page 7)

tive wisdom compared to other methods. Stock prices jump around much more than they should and the long-term nature of the stock market and speculators mean that any given stock price can be wrong for a very long time.

Bubbles and Crashes

Bubbles and crashes are textbook examples of collective decision making gone wrong. In a bubble, all of the conditions that make a group intelligent — independence, diversity, private judgment — disappear. You don't see bubbles in the real economy. If the price of a television suddenly doubled, it would be less appealing, not more so. But stocks are bought to be sold again because they grow in value. This makes the investor's opinion of the market's opinion important, making stock prices a reflection of a series of dependent decisions. This is not inherently problematic. Most of the time the stock market is an ever-changing but relatively stable mix of independent and dependent decision making.

Bubbles and crashes occur when the mix shifts too far toward dependence, and it is difficult for the people inside the bubble to see. Bubbles begin as logical attempts to cash in on powerful business trends, but the temptation to trade stocks simply because other people are doing so becomes irresistible. There can be too much information about other people.

Competing Expectations

Groups are only smart when there is a balance between public and private knowledge. When people's expectations compete, the market is stable, but in a bubble or a crash,

The CNBC Effect

The stock-market bubble of the 1990s coincided with an explosion in financial news, particularly from CNBC. The cable network provided ubiquitous, non-stop coverage of the market. Before CNBC, most of what traders knew about other investors' opinions was divined from the ticker. As CNBC's popularity grew, so did its influence, and it began to unintentionally move the market instead of just commenting.

Stock prices often changed within 15 seconds of news pieces aired on the network, so investors weren't reacting to the content of the report. They knew that other people were going to react to the news, so the only question became who was going to move fast enough.

Bombarding investors with news about what other investors were thinking, CNBC magnified the dependent nature of the stock market instead of promoting independence.

expectations converge. Taking cues from the crowd, investors find it impossible to be independent. Luckily, markets are not always bubbles and the more investors refuse to buy stocks just because other people are doing so, the less likely a bubble will inflate and the more likely the market will make an intelligent decision. ■

Democracy: Dreams of the Common Good

Is democracy an example of intelligent decision making or just a way for people to express their right to rule themselves? Voters are self-interested like consumers in a market, so their votes would not necessarily be for the public good. In fact, self-interest would imply that voting isn't worth it at all, since no single vote actually counts and the winner doesn't make much of a difference. People vote out of duty, not out of self-interest, and ideology is a better predictor of attitudes on issues than self-interest.

A poll in 2003 showed that half of those surveyed did not know there had been a tax cut the previous year. Thirty percent of Americans thought Social Security and Medicare taxes were part of the income tax system and another quarter didn't know. At the height of the Cold War, half of all Americans thought the Soviet Union was a member of NATO. Can Americans pick a candidate who will make the right decision when they are this ill-informed? Through the wisdom of crowds they can.

The Common Good

Representative democracy is distinguished by the division of labor. Politicians specialize and acquire knowledge to make good choices and citizens monitor them. Competition in the form of elections makes it more likely that politicians will make good decisions. Voting also allows for the persistent injection of local knowledge, keeping the system more diverse.

What is in the interest of the common good can mean very different things to different people. That diversity might actually make the electorate an excellent decision-making system. Even the fact that most voters are not especially well-informed or sophisticated isn't a problem. There is no reason to believe that crowds should suddenly become unintelligent in the realm of politics. But it is difficult to develop a standard by which to judge success or failure.

Making policy in a democracy is not a cognition problem; it is a cooperation and coordination problem with fuzzier and less definitive answers. It helps us deal with the most fundamental cooperation and coordination problem of how to live together — how to compromise and accept an opponent's win because we believe he or she will not destroy the things we value, and we know we will get another chance. ■