When Talking Stocks, Mind Your Metaphors

How stock commentators speak about the market can influence investors’ opinions.

The recent volatility in the stock market undoubtedly drove many casual investors to search popular financial news outlets for clues to the market’s next leap or plunge. But listening too closely to stock commentary can actually be detrimental to investors’ portfolios because commentators unwittingly describe the stock market using metaphorical language that can cloud an investor’s judgment, shows research by Professors Michael Morris and Daniel Ames.

Morris and Ames, along with coresearchers Oliver Sheldon of Cornell University and Maia Young of the University of California, Los Angeles, examined two common types of metaphors used in stock market commentary: agent metaphors, which describe price trajectories as volitional actions (such as “the Dow fought its way upward”) and object metaphors, which describe price changes as movements of inanimate objects (“the NASDAQ dropped off a cliff,” for example).

While these financial pundits may merely be trying to spice up their reports, the researchers found conclusive evidence that agent metaphors are more likely after days when the market has trended up rather than down. In addition, they found that exposure to agent-metaphor descriptions of trends leads investors to expect trend continuance rather than correction on the following day.

The danger in this situation, says Morris, is that the stock market does not actually follow any particular patterns. “But saying ‘The market moved randomly today’ isn’t much of a news story,” he notes. “The job of a commentator is to provide the story behind the numbers. A story requires events, characters and motives, and hence the metaphorical description.”

What the commentators don’t realize, he says, is that the metaphors they draw upon for up days and down days follow a pattern, and that pattern perpetuates a bias of investors to believe that uptrends offer meaningful signals about the future but that downtrends do not.

Morris and his research partners began testing their theories on the role of metaphorical language by asking subjects to study one day’s price activity and, after listening to commentary from a TV market analyst, predict the next day’s trend. The researchers manipulated the type of language subjects were exposed to, with those hearing agent metaphors more likely to expect a continuation of trends.

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THE END

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to in the market commentary, varying among agent, object and nonmetaphorical language. As predicted, participants exposed to agent metaphors were most likely to expect that day’s price trend to continue the next day.

What is it about agentic words that make people hearing them susceptible to the trend-continuance bias? Humans have a natural inclination, says Morris, to turn away from randomness and attribute events to intention—a tendency that is heightened by the animation and action that agentic descriptions convey.

The same forces behind the judgments humans make about one another are at work in the judgments we make about the stock market. “Although behavior is largely situational, we misread other people’s behavior as reflecting some kind of intention or disposition. For example, if I meet you at a party and you’re laughing and telling jokes, I’m going to expect the same level of extraversion the next time I see you,” Morris explains. “Our findings show the same is true when you’re trying to understand the stock market: if you think a change in the stock market reflects the desire of the market to go up or down, you’ll expect the same thing to be present tomorrow.”

To determine when and why commentators gravitate toward specific types of metaphors, the researchers combed the transcripts of a daily CNBC show during a six-month period, searching for use of agent and object metaphors. Again, they found a close correlation between metaphor use and market performance.

The CNBC reporters used agent metaphors more often to describe a market index on days when its trend was upward, and they used object metaphors more frequently when an index trended downward. On one up day, for example, a CNBC commentator said, “The NASDAQ index jumped 122 ½ points,” while two days later the same commentator described a poor-performing market by saying, “The S&P got caught in the downdraft.” This difference was especially marked when the stock chart showed smoothly upward or downward movement as opposed to a trend interrupted by high volatility. To check that this pattern was not a by-product of a particular historical period, the analysis was replicated during both bull and bear market periods.

This tendency to describe an ascending trend agentically has its roots in our brain’s basic instinct to distinguish animate from inanimate entities in the environment based on trajectories: we impute animacy to things that move upward, against the force of gravity. “If you’re hiking and spot something moving down the hill, it could be a falling rock. But if you see something moving up the hill, you immediately assume it is animate and you interpret the event agentically—you impute a motive or purpose,” Morris explains.

The researchers also conducted additional studies to rule out alternative explanations. For example, to make sure the pattern did not merely reflect stock commentators’ career interest in the market going up, the researchers sought to replicate the experience in a laboratory setting, using undergraduates playing the role of stock market commentator. The students were shown a series of charts representing daily market index performance and were asked to describe the day’s price movement. The researchers found that these students’ metaphors, while not as sophisticated as those of professional market reporters, also showed a bias toward using agent metaphors on up days and object metaphors on down days.

So, what can average investors do to keep metaphor-laden stock market commentary from influencing their view of the market? Morris offers a few recommendations: Don’t rely on intuitions about trends that come from looking at charts. “Charts seem to trigger metaphorical thinking that clouds decision making. And,” he adds, “the financial advisers who use the most colorful language may not be the ones who steer you the best because their metaphors may trigger intuitions that interfere with clear analysis.”

The financial advisers who use the most colorful language may not be the ones who steer you the best.

A lesson for teachers of investing is that one must either work against or work with students’ inclination to understand the market anthropomorphically. Morris notes the clever approach in Benjamin Graham’s classic The Intelligent Investor, which encourages investors to think of the stock market as a manic-depressive person whose erratic behavior changes daily. This specialized agent metaphor helps readers intuitively grasp market volatility and the opportunities it presents, says Morris.

As for stock market commentators, Morris believes they should strive to be evenhanded with their metaphors. “It’s fine for commentators to use metaphors, but they should try to balance them,” he explains. “If a commentator is always going to anthropomorphize the market, they should do it on down days as well as up days so they don’t send an unwitting signal to their audience that up trends are more real than downtrends.”

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Michael Morris is the Chavkin-Chang Professor of Leadership and Daniel Ames is the Sanford C. Bernstein & Co. Associate Professor of Leadership and Ethics in the Management Division at Columbia Business School.
THE IDEA: Deteriorating inventory can create product line opportunities.

THE RESEARCH
Managing unsold old inventory poses a challenge for firms. Consumers often view leftover products as lower-quality goods, and keeping such inventory on the market can put it in direct competition with a firm’s new stock. The firm must decide whether or not to take old inventory off the market and how to price the old inventory if it decides to sell the goods alongside the new stock. These are particularly important decisions when old products compete with new products, as in the case of fashionable clothing and some kinds of perishable food products, which deteriorate slowly and remain usable—and sellable—for some time.

The practice of managing old inventory is especially relevant when a firm sells a single product rather than an entire line: in a single-product operation, managing cannibalization of competing inventory must focus on how quickly a product deteriorates, rather than the difference in quality in a product line. Lower-than-expected market demand further increases a firm’s sensitivity to how quickly old inventory deteriorates.

Professor Oded Koenigsberg and Mark E. Ferguson of Georgia Institute of Technology used mathematical modeling to determine the optimal conditions under which a firm should keep selling all, some or none of its old inventory. The researchers also characterize optimal pricing schemes to use when a firm continues to sell all or some of the old inventory.

In some instances, the researchers found, it may be optimal to keep the old product on the market and reprice it to take advantage of a second selling opportunity. If the cost of carrying the old stock is low and the difference in quality between the old and new product is small, the firm should keep and resell a portion of the old stock at a price lower than the price of the new units. If the old stock is of low quality, it should be removed from the market to avoid cannibalization and carrying costs. The research also shows that when the market demand for new goods is uncertain and a firm knows it can profitably resell its deteriorating inventory, it will produce more of its new products.

PRACTICAL APPLICATIONS
Operations managers, marketing managers
You can use this research to make decisions about the quantity and pricing of old inventory when it can be sold to the same market as your new product. This research can also help you coordinate pricing and production decisions between your marketing and operations divisions.

Read More

Oded Koenigsberg is associate professor of marketing at Columbia Business School.
Do High CEO Salaries Pay Off?

New research suggests that high-priced talent at the top may be justified in a globalized world.

Soaring compensation for CEOs—who often earn multiples more than their midlevel colleagues—has firms, shareholders and the public wondering if they’re worth it. Perhaps they are, because globalization rewards talent at the top, argues Professor Maria Guadalupe, based on her recent research. Her study, with Vicente Cuñat of the Universitat Pompeu Fabra, examined causality between globalization and performance-based pay.

Their key findings? As global competition grew over the 1990s, so did the link between executive pay and performance, with a higher proportion of all compensation coming from incentive-based pay than in the past.

In fact, a whopping 35 percent of the rise in performance-linked contracts from 1992 to 1999 can be attributed to greater competition from globalization, the researchers say, with total compensation rising faster and higher for CEOs than the four highest-ranking executives below them.

“Compensation contracts are changing because markets are changing,” says Guadalupe. “As foreign competition increases, firms are willing to pay more for the most talented CEOs and will proportionately reward them for performance.”

Here’s how the study worked: Guadalupe first crunched salary numbers gleaned from the S&P ExecuComp database for executive pay among major U.S. manufacturers between 1992 and 1999. Those are key global trade years because barriers to entry fell sharply over that time as a result of the passage of the North American Free Trade Agreement, which enabled easier entry of Mexican- and Canadian-made goods, and the end of the Uruguay Round of General Agreement on Tariffs and Trade talks, which slashed tariffs on many foreign-made goods.

The researchers calculated shifts in incentive pay based on the change in total pay earned (including discretionary bonuses, stock options and restricted stock) linked explicitly in contracts or in implicit agreements to every extra dollar earned by the firm on a CEO’s watch. Globalization was measured by import penetration, or a rise in the share of foreign-made products in U.S. markets, many of which were previously protected.

Guadalupe and Cuñat singled out import penetration as the best measure of globalization because tariffs and exchange-rate shifts are normally outside a firm’s sphere of influence and are therefore “exogenous.” Imports can therefore be isolated and, as a measure of globalization, projected out and compared to wage fluctuations at firms, and over time.

To quantify talent, the researchers estimated the market value of each executive at each firm in the sample. To arrive at a base value of how much firms would be willing to pay for each executive, they stripped out all contributing factors to executive pay, including company type, industry characteristics and the size of the firm. They then compared that number with changes in import penetration that the firm faced.

Their analysis generated some noteworthy results. The study established a clear link between globalization and the power of incentives for senior positions. The rise in the use and amount of performance-based pay also seemed to correlate with salary spreads between levels, which echoed earlier findings by Thomas Lemieux and others about the link between globalization and the provision of incentives inside the firm.

Furthermore, the researchers’ findings questioned prior conclusions by Lucian Bebchuk and Jesse Fried suggesting that high CEO pay was the result of rent extraction, or excessive compensation because of one’s privileged position. Finally, CEOs seemed to leave firms sooner in their tenure and with more frequency, with many of them moving into radically different industries. This in turn seemed to foreshadow salaries rising to stratospheric levels, as the ranks of truly talented managers thinned from bidding wars and poaching.

Moreover, rising senior executive wage inequality suggested that the market might be motivating senior executives to exert a huge effort to reach the top, since great wealth might await them in the CEO suite.

So what do these findings indicate? As competition intensifies and as communication, technology and information costs fall further, compensation structures may continue to shift along with market dynamics—and those changes make economic sense.

“Whether one thinks that the level of CEO compensation is too high is a value judgment,” says Guadalupe. “But markets respond to change. And economic analysis shows that the market is demanding and rewarding talent at the top.”

Read More


Maria Guadalupe is assistant professor of finance and economics at Columbia Business School. This paper won Spain’s 2007 Jaime Fernández de Araoz Prize for Corporate Finance.
Invisible, Ubiquitous and Transformative: The Not-So-Obvious Power of Information Technology

New computer and information technologies not only increase productivity, they can transform entire organizations and industries.

From the most modest pencil to flashiest handheld PDA, all forms of technology change the way people work when first introduced. Ideally, new tools increase efficiency and productivity and improve the workplace. The jump in American productivity in the 1990s, for example, was attributed to a number of factors, including the rise of information technology (IT).

Around that time, market observers noted an increasingly skewed wage distribution. Because wage distribution correlates closely with productivity, economists theorized that the increase in IT might have demanded that some workers develop new skills, which pushed up their wages relative to the wages of workers with fewer IT-related skills. But no hard data had been gathered comparing productivity or worker skills before and after the widespread introduction of IT.

Professors Ann Bartel and Casey Ichniowski, with their coinvestigator Kathryn Shaw of Stanford University, sought to conclusively demonstrate the links among IT, productivity and worker skills. Following an insider econometrics approach, the researchers gathered rich data from one industry—valve manufacturing—by making field visits to manufacturing plants to understand the industry’s IT use, how productivity was best measured and where the effects of worker skills were most important.

Like many industries in the 1990s, valve manufacturers had begun replacing old machining equipment with new, IT-embedded machines. The new equipment looked very similar to the old machines but had radically changed the industry.

Focusing on a single industry allowed the researchers to make very detailed productivity comparisons. “We had to compare apples to apples, measuring seconds of run time and minutes of setup time on the same product before and after new IT-enhanced equipment was installed,” Ichniowski explains. “We had to make sure that if machinists at one plant say more programming skills are required, that machinists at the other plants are talking about the same kind of programming skills.” The researchers surveyed manufacturers, human resources managers and workers, asking about the kinds of technologies in plants, their impacts, how products had changed, what kinds of work people were doing and how people worked together differently, if at all.

In plants that adopted IT-embedded machines, the setup, manufacturing and inspection times all became faster, allowing manufacturers to make more products in any given time period.

These process improvements also begat product innovation. Decreases in the time it took to switch a machine from making one kind of valve to making a different valve permitted more flexibility in the production process. “The less-time-consuming and less-costly product switchovers made smaller batch production more profitable, which enabled more custom features. Now customers can indicate online the exact way they want a product,” explains Ichniowski.

The new machines also changed the way machinists worked. Machine operators used more math, problem-solving and teamwork skills when compared with workers in plants that had not adopted newer machines. “These plants now compete differently, adopting new business strategies favoring more customized production. Production speeds are faster, operators need new kinds of skills, and new human resources practices redefine work organization to promote greater problem solving.

“Investments in new IT confront managers and workers with the challenges of running fundamentally different organizations,” explains Ichniowski. “It’s not just installing new equipment.”

Ichniowski points out that IT is almost everywhere but that we often don’t see it. “IT in large-scale manufacturing equipment still looks a lot like the old machines on the outside. In other industries we’ve visited, IT is in a laparoscopic knife that cauterizes a wound a millisecond after a doctor makes a surgical cut, or it generates a customized script for your call center operator in response to a customer profile. I’m not sure that we appreciate just how pervasive IT is.”

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Ann Bartel is the A. Barton Hepburn Professor of Economics and director of the Human Resource Management Program, and Casey Ichniowski is the Carson Family Professor of Business in the Management Division at Columbia Business School.
Is It Really Irrational to Be Emotional?

Why strong displays of emotion—even negative ones like anger—can be good for organizations.

In the workplace, even a single overly emotional outburst can brand a professional as unreasonable or irrational and cast doubt on a person’s overall competence. But is it really irrational to be emotional? “It depends on what you mean by rationality,” says Professor Michel Tuan Pham, who undertook an extensive analysis of empirical findings across research disciplines to understand the effects of emotions and their relationship to rationality.

According to Pham, three types of rationality should be distinguished when evaluating human behavior. Based on logical rationality, people are rational if their actions and choices conform to accepted rules of reasoning and logic. Material rationality refers to the consistency between actions and self-interest: if people’s actions and choices serve their own interest, these actions and choices are materially rational. Ecological rationality refers to people’s ability to relate to their social, cultural or natural environment.

Viewed through the lens of ecological rationality, some actions can be viewed as rational, not because they appear logical or promote material benefits to the individual, but because they are consistent with greater social goals, higher moral standards or less obvious evolutionary functions. For example, altruistic acts typically are not materially beneficial to the individual who performs them, but they usually are socially or morally beneficial. “If a witness to a physical assault decides to intervene to rescue the person in distress, it may not be in their self-interest, but such an act can’t really be considered irrational,” Pham points out. “Similarly, if employees discover fraud in their company, it may not be in their material interest to be whistleblowers, but it wouldn’t be irrational.”

Pham found that the effects of emotions with respect to these three conceptions of rationality are mixed—sometimes positive, sometimes negative. “But the ecological perspective reveals the most interesting layer,” he says. When examined from a broader societal or organizational perspective, emotions turn out to have largely positive consequences because they promote prosocial and moral behavior. “It’s good to have emotional people in organizational settings because emotions keep people in check. Emotions, including anger, are very helpful in regulating behavior,” explains Pham. Consider why most people avoid cutting lines, for instance. They may not jump the line because it’s not fair. Or they may fear an angry outburst from others in line. “One of the major functions of anger is to keep people in step with social and moral norms. If I express anger at someone who cuts in line, I’m signaling that he has violated a norm. He may abandon his more immediate self-interest and take his rightful place at the end of the line to preserve social harmony,” says Pham.

Positive emotions also play a role in social and moral regulation, but to a lesser degree. “Prosocial behavior such as doing favors is encouraged by anticipations of personal pride and expressions of gratitude by the recipient,” explains Pham.

It’s difficult to overstate the contribution of human emotions in promoting smooth social functioning. People who experience fewer emotions aren’t very good at empathizing with other people or reading emotional and nonverbal cues. “Completely emotionless people are probably terrible to work or live with. It’s healthy to have people who feel and express emotions,” Pham says.

Pham also discovered recurring findings across disciplines that suggest emotions and moods have other benefits. Pham cautions against making overly broad generalizations, but generally, sad moods tend to promote better analytical thinking. In addition, while both good and bad intense moods can reduce overall reasoning abilities, intense emotional states may have played an evolutionary role in helping people make quick assessments in do-or-die situations. Good moods, which enable creativity but trigger less rigorous analysis, promote more contemplative thinking and explorative behaviors during less stressful interludes.

“There is usually a very good rational basis for our emotions,” says Pham. “We should keep in mind that they mostly help us.”

**Read More**


**Michel Tuan Pham** is the Kravis Professor of Business in the Marketing Division at Columbia Business School.
THE IDEA: Stocks can play a role in valuing and hedging pension obligations.

THE RESEARCH

Employees covered by defined benefit (DB) pension plans receive lifelong annual payouts, the sizes of which are based on a formula involving final salary and years of service. The dependence of this formula on final salary has implications for the way pension liabilities are measured. In particular, because evidence suggests that the stock market and salaries tend to move together in the long run, the pension obligation is essentially a contingent claim on the stock market and can be valued using derivative pricing techniques. Also, the correlation between pension liabilities and stock prices suggests that the optimal hedging strategy for firms is to maintain some portion of pension assets in stocks.

Policymakers and academics have shown renewed interest in understanding DB pension risk and the structure of liabilities because of a series of bankruptcies in the airline and steel industries among firms with underfunded pensions. These events in turn drove new legislation aimed at funding rules, as well as a wider debate about the proper accounting of pension liabilities in financial statements.

In an effort to resolve some of the most fundamental issues involved in DB reform, Professor Stephen Zeldes and Deborah Lucas of Northwestern University constructed a more sophisticated, market-based measure of pension obligations that takes into account the correlation between stocks and future salaries (and, because of the link between final salaries and DB payments, pension obligations), as well as the changing demographics of firms. Their model—which factors in key determinants of pension liability like the age structure of the current workforce, mortality rates and rates of job separation—represents a significant improvement over the standard method of discounting cash flows at an arbitrary discount rate.

This research has numerous implications for DB pension asset allocation. If firms wish to hedge a broad measure of pension liabilities, then stocks should constitute a potentially important part of their optimal pension portfolio, say Zeldes and Lucas. The share in stocks should vary according to bankruptcy risk, job separation rates and mortality. More important, the share in stocks should be higher for plans that cover primarily young, active workers (whose pensions will depend on their future salaries), whereas the equity share should be lower for plans whose participants are primarily separated and retired workers (whose pensions depend only on past salaries).

PRACTICAL APPLICATIONS

Firms and fund managers

Quantifying real risks helps you gauge whether or not you can meet pension payout promises. It also helps you choose assets for the fund, based on current and future beneficiaries’ demographic and economic makeup.

Policymakers

You might value this research for clearer disclosure of DB pension liabilities, because the government is obligated to step in and pay the unfunded pension promises of bankrupt firms.

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Stephen Zeldes is the Benjamin Rosen Professor of Finance and Economics at Columbia Business School.
Bringing Rigor to Financial Forecasting

By adding quantitative discipline to their number crunching, financial analysts may avoid the psychological biases that can lead to judgment errors.

The old adage that there are three types of lies—lies, damned lies and statistics—could easily apply to accounting, because shifting numbers around can yield radically different results.

That’s why a group of analysts known as fundamentalists—for their bottom-up, microscopic approach to collecting and interpreting data—may benefit by stepping back from the minutiae and applying some quantitative rigor to their financial statement analysis (FSA), argues Professor Kenton Yee. FSA is the process of transforming accounting information from quarterly and annual statements into forecasts of future cash flow and price targets.

In contrast to the fundamentalists, quantitative financial analysts generally focus on the big picture by using computer modeling. Guided by statistical asset-pricing theories, quantitative analysts may purposely ignore details and hone in on one or two fundamental variables, like a firm’s earnings quality score. (Quantitative funds were disproportionately punished in the recent market sell-off, with critics panning their aggressive positions, admits Yee, but he says their troubles are not caused by how they process accounting information.)

“In fundamental analysis, changing a few parameters generates a whole different outcome, which can lead to irrational decisions,” Yee explains. “Fundamentalists can improve their performance by supplementing their analyses with quantitative processes and frameworks that instill discipline and prevent errors caused by psychological tendencies to misinterpret details.”

Though the fundamentalists’ in-depth approach often adds value because field research can uncover hidden problems, too much data can cloud the big picture, inviting analysts to identify patterns—real or imagined—and draw unfounded conclusions from those patterns, Yee says. Abundant data, in turn, might push analysts toward making irrational decisions based on irrelevant, fleeting or anecdotal information, he adds.

Moreover, cleaning up or tweaking accounting numbers to correct for bookkeeping anomalies and earnings manipulation is also prone to psychological pitfalls, he points out, because the many subjective choices required can lead to irrational decision making.

In his new research, Yee identifies 10 psychological pitfalls fundamentalists are subject to, including overconfidence, the belief that a favorable outcome is more likely than what will actually occur; overoptimism, overestimating the role of chance or skill rather than making decisions based on realistic probabilities; and overreaction to recent events, such as a big announcement by a prominent company. Other judgment biases common to fundamentalists include hindsight bias, an overconfidence that an anecdotal scenario will reoccur; herding, following mass movements irrespective of logic; and myopia, a focus on recent, and perhaps exceptional, changes.

These behavioral biases can influence which nuggets of information an analyst focuses on or ignores, the frequency of forecast revisions and any subsequent conclusions, Yee notes.

“The emphasis instead should be on a consistent analytical process,” Yee says. “Quantitative measures such as quantified scorecards and portfolio constraints can add value by disciplining analysts to resist their own subjectivity. The key is committing to an intellectual paradigm you believe in and being disciplined enough to stick with it in the long haul irrespective of short-term results.”

This idea that committing to a disciplined FSA process can keep fundamentalists from interjecting psychology and emotions into their analyses has roots, Yee says, in a 2,500-year-old concept: Plato’s rule of law. The rule of law states that government authorities can exercise power only within boundaries delineated in written, publicly disclosed laws, which constrain police and prosecutors from behaving in capricious or self-serving ways. When applied to financial analysis, the principle suggests that a similar discipline will prevent fundamentalist analysts from acting on emotion.

“Ideally, a conclusion from FSA should not depend on the personality or passion of the analyst performing the exercise,” Yee says. “A disciplined process adds value by forcing analysts to make emotionally detached assessments that conform to preagreed stock-selection criteria.”

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Kenton Yee is assistant professor of accounting at Columbia Business School.
Want to Influence Someone? Pile on the Information

Politicians and marketers take note: when it comes to persuading people who have ambivalent attitudes, more is more.

though she’s not a policy analyst or a campaign manager, Professor Gita Johar could teach the 2008 presidential candidates a thing or two about reaching swing voters.

Her new research, which examines why people with ambivalent attitudes are more open to influence, shows that getting a glut of information to potential supporters can be very effective.

“If a candidate can provide a lot of information, some of it is bound to stick. Especially early in the campaign, when many voters are ambivalent and don’t have much knowledge about those running for office, generating a volume of information is one way to define people’s attitudes,” she explains.

Quantity trumps quality in this instance because ambivalent individuals are likely to accept messages regardless of their source’s perceived reliability, shows Johar’s research, conducted with Martin Zemborain of Austral University in Argentina. Because ambivalent individuals have conflicting positive and negative views, they are seeking a way to resolve that discord and solidify their opinions. This makes them open to persuasion from a variety of sources, reputable and otherwise.

Johar and Zemborain found that people with strong opinions, by contrast, are more likely to evaluate the reliability of a message’s source before accepting it. Their attitudes can also be influenced, however, if they are unable to check for a message source’s validity and are unaware that they are being persuaded. “People know they shouldn’t be influenced by outside sources, but today, there is so much clutter that we are sometimes influenced without realizing it,” says Johar.

In three separate studies, the researchers examined how this susceptibility to outside influence plays out in the real world, specifically in the political and marketing realms.

First, they asked subjects to evaluate 2004 presidential candidate Dennis Kucinich (chosen because he was a lesser-known politician) before and after being exposed to either a positive or negative message about him. The subjects were told the statements came from either a friend or the radio. As expected, subjects with ambivalent attitudes toward Kucinich were less discriminating about the source, allowing their friends’ messages to sway their opinions, while those with defined opinions accepted only the radio—ostensibly a more reliable source—as an authority on Kucinich.

These results are particularly compelling given the wide array and quality of information available today, Johar points out. Voters, for example, may form their opinions of candidates based on knowledge they obtain from newspapers, television, Web sites, blogs, friends and the candidates themselves.

The same bounty of information sources applies to the marketing arena—where understanding what influences opinions is essential to business success. To test attitudinal ambivalence from a marketing perspective, the researchers “launched” a new shower gel brand. They measured college students’ opinions of the new product both before and after receiving an influencing message—a negative description of the product, supposedly coming from either a student at their own university or a student at another university.

Subjects who were ambivalent about the shower gel were more likely to accept the negative information from either source, while those with strong opinions were persuaded to change their mind more often when the negative description of the shower gel came from students at their own university—a group the subjects identified in pretesting as more likely to share their own preferences.

The real-world implication for marketers is the same as for politicians: the more information you generate, the better. “During the launch of a new product, it is important to provide consumers as much information as possible to enable them to resolve ambivalent feelings about the product,” notes Johar.

The key in both disciplines is to reach people while they are still forming their opinions. Once solid opinions are established, what Johar calls “motivated processing” kicks in, and it becomes much harder to manipulate beliefs. “If someone decides to support Hillary Clinton, for example, they might only monitor the publications or blogs that provide positive information about her and ignore other information,” she explains. Similarly, people with less ambivalent attitudes about a certain product may continue to seek information about it, but they will be less motivated to do so once their beliefs are firmly in place.

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Gita Johar is the Meyer Feldberg Professor of Business in the Marketing Division at Columbia Business School.
Does Shareholder Voting Curb CEO Pay?

Giving shareholders a say may not have as much impact on executive compensation as investors would like.

When Robert Nardelli lost his job as CEO of Home Depot in January 2007, he walked away with cash, stock options and other benefits valued at $210 million—and left a trail of angry shareholders in his wake. Nardelli is one of many CEOs facing increased scrutiny as investors question ballooning executive compensation. "Shareholders today are concerned because executive compensation doesn't seem to reflect underlying performance," says Professor Sudhakar Balachandran.

One idea asserted repeatedly is that giving shareholders more power in determining a CEO’s pay structure may rein in soaring salaries. Would Nardelli, for example, have gotten the same windfall if shareholders were able to vote on his compensation package? While it seems an obvious no, Balachandran’s new research shows a more ambiguous conclusion.

To examine the effect of shareholder voting on executive compensation, sometimes called say on pay, Balachandran and coresearchers Fabrizio Ferri and David Maber of Harvard Business School turned to a 2003 UK regulation that required publicly traded firms to submit an executive remuneration report to a nonbinding shareholder vote at their annual meeting. The researchers aimed to find out how the regulation, called the Directors’ Remuneration Report (DRR), affected the sensitivity (or correlation) of cash and total CEO pay to performance at UK companies.

The researchers examined average compensation and pay-to-performance sensitivity in a large sample of UK firms both before and after regulation (2000–02 and 2003–05, respectively), with mixed results. They found no overall change in pay-to-performance sensitivity, but when they examined differences depending on whether stock returns and return on assets were positive or negative, an interesting trend emerged. Compensation after the DRR became more sensitive to negative return on assets—good news for those unhappy about executives receiving high pay despite poor performance. In other words, after the rule, compensation decreased as performance became more negative, a pattern not found before the rule.

However, the researchers found weaker evidence of another effect. When a specific industry garnered positive stock returns, CEOs of individual companies within that industry received higher pay than they did before the DRR, even when their firms had not outperformed the industry overall. Therefore, executives may receive greater compensation during times of positive performance—when shareholders are likely less skeptical about compensation—even if the performance in question is the result of simply being lucky enough to be part of an industry trend.

These findings suggest that the DRR did not have the same effect in all firms but rather had different effects in different circumstances. Therefore, supporters of say on pay should not view it as a panacea for executive compensation problems, says Balachandran.

The researchers further caution that a number of other variables—including the overall changes in financial disclosure requirements brought about by the DRR—may have come into play, clouding the true impact of the regulation.

To benchmark their findings, the researchers compared the UK data to executive compensation at U.S. companies of comparable size during the same time periods to see if parallel compensation dynamics occurred in a country that did not enact say on pay legislation. The data showed similar trends in total compensation in the two countries.

Factors other than say on pay—that were specific to U.S., but not UK, companies—may have caused similar effects on executive compensation in the United States as the DRR, notes Balachandran. “During the same time as the DRR in the UK, U.S. companies were faced with the Sarbanes-Oxley Act and a more attentive mood overall by shareholders and directors,” he says.

The issue of shareholder voting’s influence on executive compensation is not likely to disappear anytime soon. A bill seeking to give shareholders the right to an annual advisory vote is working its way through Congress. In addition, many U.S. firms—including Verizon, Aflac and Blockbuster—have recently been subjects of shareholder proposals requesting the adoption of say on pay.

But shareholders who win the right to an advisory vote may get less than they hope for. “If shareholders vote no on a compensation package, it is a nonbinding vote,” Balachandran says. “A company can still go ahead and do what it wants or needs to do.”

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What is strategic intuition, and how does it work?

Strategic intuition is a flash of insight in which you have a very clear thought about a solution to a problem and a path to action. Recent advances in neuroscience and cognitive psychology explain to us how it works: your brain connects the dots from your experience and knowledge, and tells you what to do.

How is it different from a snap judgment?

Science recognizes three kinds of intuition: ordinary, expert and strategic. Ordinary intuition is like an instinct with its own mysterious origins: “I don’t know why I thought that.” Expert intuition kicks in so that you instantly recognize something familiar. When a tennis pro reacts to the arc and speed of a tennis ball, for example, that’s expert intuition. It’s based on being very familiar with a field, so it’s quick. Malcolm Gladwell wrote about expert intuition in Blink.

But for new situations, or to innovate, it’s important not to use expert intuition.

Unlike the blink of expert intuition, strategic intuition happens slowly. People typically say that they have their best ideas in the shower or stuck in traffic or on the train. And it can solve a problem that’s been on their minds for a month. It feels sudden because at last things come together in the mind, but that’s only the last step, and it doesn’t happen in the heat of action.

An example I use in class that’s not in the book is how Henry Ford created the moving assembly line, which changed manufacturing for all time. First, he imitated the stationary assembly line of Oldsmobile, which made the first mass-produced cars, by the way; Ford wasn’t the first to do that.

But Ford was the first to get the idea of moving the chassis from station to station, instead of having the assembly teams lug all their gear from station to station. Where did he get that idea? From the Chicago stockyards. A slaughterhouse uses a moving disassembly line, where the carcass moves along a rail from station to station. Ford put that in reverse and made a moving assembly line.

Note that he didn’t just steal or imitate ideas from within the car industry. Nor was it simply a matter of the social and economic forces of his time being ripe for Ford’s innovation, which is often how official accounts portray great new ideas. Ford searched his mind for everything he had ever seen and hit on the stockyards. So where should you look for elements to combine? Everywhere.

Why is strategic intuition important?

You’ve probably heard that today you need creative, entrepreneurial or innovative thinking to compete in the modern world. These amount to the same thing: how to figure out what to do in a new situation. That comes from flashes of insight, as strategic intuition. It’s how you solve all kinds of problems in today’s fast-moving world, and it’s at the core of human achievements from the beginning of time.

Scholars have written about flashes of insight for centuries. The best description comes from Carl von Clausewitz in his classic on military strategy, On War, where he outlines the four steps of how strategic intuition happens: One, take “examples from history” and put them on the shelves of your brain. Two, cultivate “presence of mind,” to free your brain of all preconceptions about the problem at hand and what solution might work. Three is the actual flash of insight itself, when a new combination of examples from history connect in your brain. Four is resolution, where you not only see the way forward but resolve to go ahead and do it.

There are currently three massive misconceptions about how strategic thinking works. I call them plod, plot and play. Plod means you go beyond your usual routines to analyze a much wider range and depth of information,
and advanced technology means there is essentially no limit to the amount of data you can and should plod through. Plot means you spend a lot of time defining your mission, your goals, your objectives, your subobjectives, and so on. Play means you give up your usual ways of thinking to build a race car out of duct tape or toss frisbees across the office or throw random words onto a Velcro board.

But the plodders and plotters and players are all wrong. The trick is to plod and plot and play at the same moment. That’s what a flash of insight does. It’s how the brain makes something new out of real information and projects it as a strategy. But you get there, not through plodding or plotting or playing, but through understanding how strategic intuition works and how to do it better.

The four elements that von Clausewitz introduced have been around for a while. Why don’t we see more examples of strategic intuition at work in business?

I think people really have the wrong idea about what strategy is. They think strategy is a plan—usually a five-year plan—that they have to stick to. Then when some unpredictable event happens, instead of changing the plan, they pass up an opportunity to do something better.

For example, Puma started out as an ordinary athletic-shoe company. CEO Jochen Zeitz inherited Puma when it was dying. He came up with a five-year plan to save the company by cutting costs, mostly by shifting production from Germany to Asia.

A year into his five-year plan the Beastie Boys wore Puma’s Clyde sneaker at a concert. The Clyde is a shoe that Walt “Clyde” Frazier of the New York Knicks wore, so the shoes are called Clydes. They don’t look much fancier than the usual athletic shoe, but after the concert, they flew off the shelves—they suddenly became a hot fashion item.

This was a big disruption to Zeitz’s five-year plan. He hadn’t meant to make so many Clydes. And suddenly, he realized, he was in the fashion business, not the athletic-shoe business. So instead of sticking to his plan, Zeitz threw it out and started changing Puma into the fashion and lifestyle company we know today. Today they sell $300 fashion bags to carry to and from your yoga class or gym.

It’s very difficult to throw out a five-year plan. People don’t want to do it, because they think that means they’ll be changing their plan every five minutes. But a flash of insight on the scale of Zeitz’s doesn’t happen every five minutes. When strategic intuition gives you a big idea, you make a big change. That’s the right way to be flexible.

Most people think of strategy as a military or business idea. But you say strategic intuition applies to many other fields too. How does that work?

Strategy applies to all human endeavors, to any pursuit where you take action to achieve something you consider worthwhile. Strategic intuition is a way to do that. It’s a philosophy of mind, of strategic thinking rather than strategy for any particular discipline. Strategy simply asks, “How do you figure out what to do?” You ask that question in all fields, including how you lead your life.

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William Duggan is associate professor of management at Columbia Business School. To learn more and to discuss strategic intuition, visit www.strategic-intuition.com.
For Daniel Beunza, one thing about uncertainty is certain: nowadays, it sits at the top of every decision maker’s agenda.

It is one thing to act when the future can easily be anticipated, but it is something else to do so when the future is radically unknown. The difference between these two situations is captured by the concept of Knightian uncertainty. The idea dates back to 1921, when the famed American economist Frank Knight drew a distinction that to this day has proved fundamental for managers, policymakers and investors. When the range of possible contingencies is open and the odds are unclear, Knight argued, decision making is more dangerous and complex—but also more lucrative. Knight referred to this scenario as “uncertainty” to distinguish it from the more predictable setting of “risk.”

Why study uncertainty? The topic is, I believe, directly relevant to today’s ever-changing world. In the past 50 years, business researchers have made impressive advances by modeling situations in which the future could be more or less known in advance. From Porter’s five forces to the capital asset pricing model, most business models assume risk. But in the current business environment—of innovation, arbitrage, financial bubbles, climate change and terrorism—Knightian uncertainty, not risk, tops decision makers’ agendas. It should also be at the top of researchers’ agendas.

A workshop that I recently organized at Columbia Business School examined these crucial topics. The workshop explored several key dimensions of the Knightian approach to uncertainty and laid out a radical research agenda that is particularly relevant outside the ivory tower. To do so, it brought together a cross-disciplinary group of professors, including Bruce Kogut and me from the Business School’s Management Division, David Stark from Columbia’s Department of Sociology and Emanuel Derman from Columbia’s School of Engineering, as well as economists, sociologists and management theorists from the United States, England and France.

One of uncertainty’s most counterintuitive aspects is that the recipes that work best in a predictable world of risk can create major disasters under a scenario of uncertainty—and vice versa. This distinction is most clearly articulated in author and trader Nassim Taleb’s best-seller *The Black Swan*. At the workshop, Taleb distinguished between “Mediocristan” and “Extremistan.” Mediocristan denotes phenomena that fit a conventional normal distribution: the size of mountains, the weight of people or the profits of companies in established industries. Extremistan, by contrast, denotes rare phenomena that do not fit normal distributions: the wealth of Bill Gates, the returns of some hedge funds or stock-price movements during market crises.

In Mediocristan, routine rules; in Extremistan, managers have to prepare for disruptive events like blockbuster hits, bankruptcies, killer apps or sudden defaults. Taleb’s implication is that it is dangerous for managers to mistake Mediocristan for Extremistan and assume that they can predict the world.

How, then, should companies confront uncertainty? A different type of organization is necessary. Uncertainty poses managerial problems that go far beyond making the numbers for the next quarter. Indeed, earnings may not even be the key measure of success. Employment, sales, production—even location—may be the reason why a company gains resources. For instances such as these, sociologist David Stark calls for a different internal logic of organization, one that allows companies to adhere to competing conceptions of worth: Let some employees think that profits are everything, and let others have faith in sales; and do not impose a single criterion for “what really matters,” he says. To accomplish this, firms...
It is one thing to act when the future can be easily anticipated, but it is something else to do so when the future is radically unknown.

I need to avoid hierarchy and bureaucracy—and instead embrace what Stark calls “heterarchy.” Heterarchies pursue a dense network of horizontal interactions and distributed accountability.

Next, consider how uncertainty manifests itself on Wall Street. From portfolio insurance to options arbitrage, the last 40 years of academic research in finance have provided Wall Street practitioners with impressive investment tools. But in contexts of uncertainty, quantitative models can suddenly stop working and turn against their creators. Such was the message financial engineer Emanuel Derman gave at the workshop: mathematical formulas, he argued, provide a mind-broadening ability to value stocks by association. Modern finance operates by analogy, but profitable analogies become overexploited and may break down. Examples include the stock markets of 1987 and 1998, as well as this summer’s subprime mortgage debacle.

My work, which I discussed at the workshop, addresses this dilemma as it pertains to quantitative finance, pointing to financial tools as a solution to the very challenge that they create. My presentation examined the ways in which merger arbitrageurs use a visualization known as the spread plot. Arbitrageurs operate in an environment of uncertainty. They exploit this uncertainty by relying on mathematical models, but their choice of formulas could be misguided. Arbitrageurs use the spread plot to gauge the choices made by their rivals and gain reassurance of their own use of models and formulas. In this way, quantitative finance provides a remedy for some of the problems that it originates.

Uncertainty also comes into play when we consider strategic rivalry. What does “acting strategically” mean when the opponent is unknown? Traditionally, strategic interaction has been studied in game theory, but classic game theory does not account for uncertainty. Specifically, orthodox game theorists typically assume that both players in a game know how the other thinks and what their interests and payoffs are—the so-called assumption of common knowledge. But assuming that you know your opponent is a dangerous thing when this is in fact not the case; by doing so, businesses may overexpose themselves or destroy the beginning of an emergent partnership.

Bringing uncertainty into a game radically shifts the player’s problem. Instead of an abstract exercise of calculative anticipation, strategizing becomes something more social and personal—in short, more interesting. The approach of so-called epistemic game theory views strategic interaction as a way for players to find out about each other. In this alternative, uncertainty-based conception of games, the moves by other players provide a partial answer to the central questions that players confront: How do my rivals think? And what do they think that I think of them?

Ultimately, awareness of uncertainty in organizations, markets and strategic games is crucial. The world constantly reminds us that we know less about our environment, our formulas and our rivals than we think we do. Gaining a better understanding of what uncertainty is and how it changes our conventional ways of managing, investing or reacting to others can help decision makers fare better in times of change.

Daniel Beunza is assistant professor of management at Columbia Business School. With David Stark, he recently co-organized the Uncertainty Workshop at Columbia University, a cross-disciplinary debate about how economic actors make decisions with limited knowledge of the world. For more information, see http://uncertaintycolumbia.googlepages.com/home.
IN THIS ISSUE . . .

Michael Morris and Daniel Ames consider how financial news commentators unwittingly influence investors. Maria Guadalupe explains why globalization may justify spiraling CEO compensation, while Gita Johar looks into persuading the ambivalent. Michel Tuan Pham ponders the hidden logic behind emotions, and William Duggan illustrates how to harness strategic intuition. Other articles explore the study of uncertainty, show firms how to manage deteriorating inventory and examine the subjective side of financial statement analysis.

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